Attachment 2 – ChargePoint Documentation

- Part A - “Express Plus, DC Fast Charging Solution, Site Design Guide”
- Part B - “Express Plus, DC Fast Charging Platform, Installation Guide”
- Part C - Concrete Mounting Template Instructions
- Part D - Express Plus Specifications
- Part E - Packing Slip for Delivered Equipment

FOR

COUNTY OF NEVADA
STATE OF CALIFORNIA

Electric Bus Charging Project
Nevada County Operations Center (NCOC) Phase-1

COUNTY PROJECT NO. 889830

California Air Resources Board (CARB) Grant No. G20-NS-001

A sub-grant of U.S. Environmental Protection Agency 2019 and 2020 Targeted Air Shed Grant Program #TA98T15301-0 with CARB

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Part A – "Express Plus, DC Fast Charging Solution, Site Design Guide"

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Express Plus

DC Fast Charging Station

Site Design 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 Class 1 hazardous locations, such as near flammable, explosive, or combustible vapors or gases.**
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 any cable is frayed, has broken insulation, or shows 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 signs of damage.**
10. **Use 90°C wire copper or aluminum conductors only.**

Important: Under no circumstances will compliance with the information in this manual relieve the user of the responsibility to comply with all applicable codes or safety standards. This document describes the approved installation and mounting scenarios. If it is not possible to perform an installation following the procedures in this document, contact ChargePoint. **ChargePoint is not responsible for any damages that may result from custom installations that are not described in this document or fail to adhere to installation recommendations.**

Product Disposal

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.com/guides or chargepoint.com/eu/guides.

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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.

Contents

Site Design Guidelines 1

This document describes how to design a project site for the ChargePoint® Express Plus DC fast charging solution.

The Express Plus product family is a modular solution for scalable fast charging of electric vehicles. Power Link charging stations are powered by Power Block AC/DC converters, and the entire system communicates with ChargePoint using the cellular network. This connectivity is required for diagnostics and reporting, as well as communication with the online dashboard that allows the station owner to control its settings and commands. See the section Cellular Connectivity (page 27) for detailed information.

Full specifications and system certifications for Express Plus can be found in the datasheet. Contact your ChargePoint representative for a copy.

Access ChargePoint documents online at chargepoint.com/guides and chargepoint.com/eu/guides for each phase of the project.

Document	Content	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
Concrete Mounting Template Guide	Instructions to embed the charging station template in a concrete pad with anchor bolts and conduit placement	Site construction contractor
Installation Guide	Anchoring, wiring, and powering on	Installer
Operation and Maintenance Guide	Operation and preventative maintenance	Station owner or facility manager
Service Guides	Component replacement procedures	Station owner or third party servicer

Important: ChargePoint recommends consulting with an engineer to create site specific drawings. Ensure the installation complies with all applicable codes and ordinances.

Product Components

Several components comprise a full Express Plus installation:

- Power Module: A scalable module that contains power conversion electronics.
- Power Block: Enclosure that holds up to 5 Power Modules and provides them with a liquid cooling system. The Power Block centralizes power conversion that supplies rectified DC power to Power Links.
- Power Link: Charging station designed for industrial environments that can be mounted on a pedestal, on a wall, or overhead. It can be configured with a charging cable management kit (CMK) attached to the station, or an optional overhead cable reel. Each Power Link is equipped with an isolation monitor and short circuit protection to ensure safe operation.

The Express Plus solution is highly modular. Each Power Block has two DC outputs. That power can be fed to a single station, or to two different stations, depending on configuration. Low voltage and Ethernet connectivity are also fed to either one or two stations. If a distribution cabinet is used, the number of connected stations can be increased to eight (two of which can actively charge at a time).

Initial Site Guidelines

Designing electrical infrastructure to support current and future EV charging demand can help avoid costly upgrades later as EV adoption grows.

An onsite evaluation is needed to determine conduit and wiring requirements from the panel to the proposed parking spaces, as well as to measure cellular signal levels and identify suitable locations for any necessary cellular signal booster equipment.

If you have pre-existing infrastructure or are using your own preferred electrical contractor to prepare your site, a Construction Signoff Form by a ChargePoint Operations and Maintenance (O&M) partner is required to certify compliance with electrical code, and to ensure everything was prepared to ChargePoint specifications.

Important: You must be a licensed electrician and complete online training to become a ChargePoint certified installer. If you do not complete training, you cannot access the ChargePoint network to complete installation.

Find online training at: chargepoint.com/installers or chargepoint.com/eu/installers

If the charging station is not installed by a ChargePoint certified installer, using a ChargePoint approved method, it is not covered under warranty and ChargePoint is not responsible for any malfunctions.

Plan for Future Charging Capacity

Designing electrical infrastructure to support current and future needs for EV charging helps avoid costly upgrades later as demand for EV charging grows.

Consider these methods to prepare a site for future charging stations in a later phase of work:

- Add extra capacity if electrical panels are being upgraded now.
- Use sub-panels as a way to shorten electrical paths.
- Maximize the conduit and conductor sizes (to product specifications) between the main electrical panel and future stations, to prevent needing to re-pull wire later.
- Below-ground wiring can be pre-staged if the correct site construction is performed in advance. Allowed terminations include a distribution unit, junction box, or plugged conduit. This eases cable pulls for future stations.

Charging Station Placement

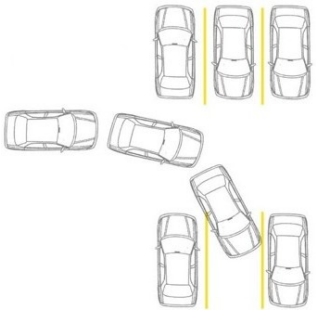
To minimize costs, choose station locations that are as close as possible to the available electrical infrastructure. Selecting nearby locations helps minimize long wire runs, as well as any conduit or trenching work if the site uses underground service wiring.

WARNING: The Power Block and Power Link must be installed on a surface rated for the weight of the enclosure (a level concrete base for either Power Block or Power Link, or a flat wall or gantry for Power Link) . Asphalt cannot support the full weight of the station. Failure to install the enclosure on a suitable surface may cause it to tip over, resulting in death, personal injury, or property damage.

Layout considerations:

- Determine appropriate ground anchoring locations where concrete exists or can be installed (no asphalt surfaces).
- Consider locations where it will be easy to add future stations.
- Determine the best conduit layout to minimize linear conduit costs to multiple parking spaces. If possible, avoid or minimize trenching requirements, especially more costly trenching to run conduit under asphalt surfaces.
- Determine if the existing utility service and electrical panel capacity is sufficient. Identify costs for any necessary upgrades and/or a new dedicated electrical panel. ChargePoint recommends using a certified electrician to evaluate available capacity and identify any upgrades that may be required.
- If a dedicated EV electrical panel is required, choose a panel located close to the existing electrical supply.
- Measure cellular signal levels to ensure adequate cellular coverage at the station locations. To ensure adequate signal strength in underground or enclosed parking structures, cellular repeaters may be required. For more information, see Cellular Connectivity (page 27).
- ChargePoint recommends avoiding locations under trees where sap, pollen, or leaves would fall on the charging station and increase the station owner's site maintenance workload.

- For stall parking, ChargePoint recommends using perpendicular parking stalls that allow a vehicle to enter either front-first or rear-first, to better accommodate the varied locations of EV charge ports. Diagonal stall parking is not advised.



Note: While ChargePoint tests charging stations with a majority of upcoming vehicles, ChargePoint cannot guarantee the port locations of future vehicles and cannot warrant the configurations proposed will work for all vehicles.

- Choose adjacent parking spaces in an area with adequate lighting.
- Consider how easily drivers can find the stations they need to access.
- Check local requirements for accessibility and pathway width, sometimes called “path of travel”, to ensure that station placement does not restrict sidewalk use.
- Building a pad into the head of a parking space (instead of on the sidewalk) is allowed if local code allows it compared to the minimum parking space length, and the pad meets all pad requirements listed in this document.

Important: Place each charging station to maximize cable reach for the varied charge port locations on different EVs.

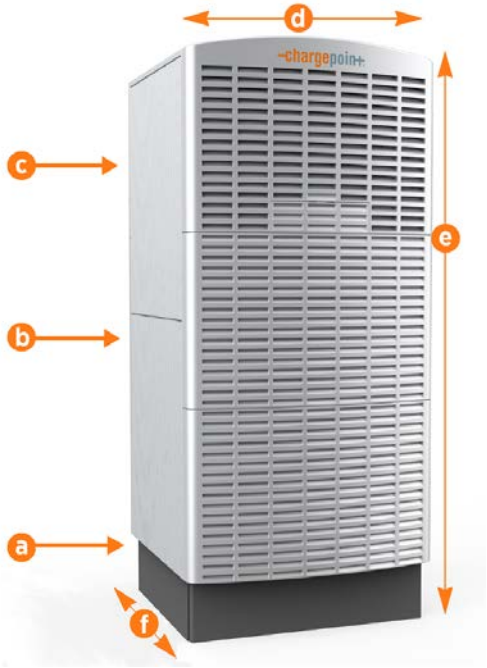
- If a pull-through parking (gas station model) is used, ChargePoint recommends placing at least one charging station on each side of the island. This avoids situations where the charging station is on the opposite side of the vehicle from the charge port.
- The Power Link can have different charging cable types (such as one CCS and one CHAdeMO) to offer flexibility, or it can have two of the same cable type (in cases such as commercial fleets). The cables cannot both charge at the same time.
    - If the Power Link will have different cable types, center the station on one parking space to maximize cable reach.
    - If the Power Link will have the same cable type, center the station between parking spots to allow each cable to be plugged in whenever it is available.

Civil and Mechanical Design 2

Component Dimensions

Power Block

Each Power Block is made up of these components:



a. Pedestal: secures the Power Block and provides access for either stub-up or surface mount installations
b. Center enclosure (dry box): a bay for up to five Power Modules, and bus bars to land all input and output cables
c. Top enclosure (wet box): auxiliary power supply and temperature management components
d. Width: 988 mm (38.9 in)
e. Height: 2191 mm (86.3 in)
f. Depth: 1039 mm (40.9 in)

A fully loaded Power Block weighs approximately 680 kg (1500 lbs). Each Power Module weighs approximately 45 kg (98.5 lbs).

Power Link

The Power Link is a vertical enclosure that can be mounted on a pedestal, wall, or overhead. Stations can be configured with one or two charge cables, available in multiple lengths. The Power Link can have different charging cable types (such as one CCS and one CHAdeMO) to offer flexibility, or it can have the same cable type (in cases such as commercial fleets). The cables cannot both charge at the same time.

The Power Link can be configured with a Cable Management Kit (CMK), a rear mast with arms that swing forward to extend cable reach.

a. Height of pedestal mount station with CMK: 2400 mm (94.5 in) at full height, or 2197 mm (86.5 in) for low clearance
b. Height of wall or overhead station only: 940 mm (37 in)
c. Height of pedestal mount station: 1851 mm (72.9 in)
d. Depth: 350 mm (13.8 in) (depth with CMK 520 mm (20.5 in))
e. Width: 720 mm (28.3 in) (width with CMK 876 mm (34.5 in))

Note: The Power Link depth dimension is for the station and pedestal depth only. For service door swing and charge cable protrusion, see Clearances (page 14).

The maximum Power Link cable reach from the front of the station to the vehicle charge port is approximately 3.6 m (12 ft) at a height of 0.6 m (2 ft) above the ground.

A Power Link weighs approximately 250 kg (550 lbs).

Mounting Specifications for Pads

The Power Block and Power Link (in pedestal configuration) can each be installed on either a newly poured pad or an existing concrete surface. The mounting surface must be smooth and cannot exceed a slope of 6.35 mm per 304.8 mm (0.25 inches per foot).

WARNING: If not installed correctly, the ChargePoint® charging components may pose a fall hazard, leading to death, personal injury, or property damage. Always use the provided Concrete Mounting Template or a ChargePoint-approved surface mounting solution to install ChargePoint charging components and install in accordance with applicable codes and standards using licensed professionals. Non-approved installation methods are performed at the risk of the contractor and void the Limited One-Year Parts Exchange Warranty.

Note: Although new pad installation is the most common mounting method, Surface Conduit Entry (SCE) is also allowed and described later in this chapter. Contact ChargePointfor the approved mounting hardware if a site requires an SCE installation, a surface mount template for drilled and epoxied anchor bolts, or low clearance accommodation (such as a low ceiling parking garage).

Power Block

Conservative stability specifications for the Power Block are listed below for the following design scenarios:

1. 170mph wind, high seismic, Class 3 Soil
2. 170mph wind, high seismic, Class 4 Soil
3. 170mph wind, high seismic, Class 5 Soil
4. 140mph wind, lower seismic, Class 3 Soil
5. 140mph wind, lower seismic, Class 4 Soil
6. 140mph wind, lower seismic, Class 5 Soil

All scenarios assume:

- Minimum concrete rating of 2500 PSI
- An A1 anchor bolt embedment of 9 inches using M16 (5/8 in) HAS-V-36 all-threaded rod (ASTM F1554 Gr. 36) anchor rod with HIT-HY 200 adhesive

Design	B1, Width	B2, Width	T, Thickness	#N1 @ S1" O.C. Top Rebar	#N2 @ S2" O.C. Bottom Rebar
1	1753 mm (69 in)	1753 mm (69 in)	457 mm (18 in)	#4 @ 305 mm (12 in) O.C.	#4 @ 305 mm (12 in) O.C.
2	1753 mm (69 in)	1753 mm (69 in)	686 mm (27 in)	#4 @ 152 mm (6 in) O.C.	#4 @ 152 mm (6 in) O.C.
3	1524 mm (60 in)	1524 mm (60 in)	457 mm (18 in)	#4 @ 305 mm (12 in) O.C.	#4 @ 305 mm (12 in) O.C

Design	B1, Width	B2, Width	T, Thickness	#N1 @ S1" O.C. Top Rebar	#N2 @ S2" O.C. Bottom Rebar
4	1524 mm (60 in)	1524 mm (60 in)	457 mm (18 in)	#4 @ 305 mm (12 in) O.C.	#4 @ 305 mm (12 in) O.C.
5	1524 mm (60 in)	1524 mm (60 in)	457 mm (18 in)	#4 @ 305 mm (12 in) O.C	#4 @ 305 mm (12 in) O.C
6	1524 mm (60 in)	1524 mm (60 in)	457 mm (18 in)	#4 @ 305 mm (12 in) O.C	#4 @ 305 mm (12 in) O.C

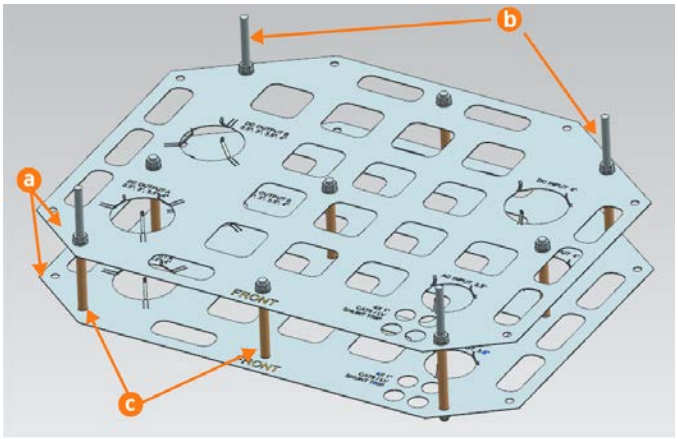
The concrete pad for the Power Block must either be designed to be site-specific, or must meet the specifications above. In some extreme conditions, a larger pad would be required. For sites with less stringent seismic, soil, or wind conditions, a smaller pad might be possible.

If the existing pad does not meet the specifications above, it must be inspected and approved by a structural engineer for each component's dimensions and weight. If needed, give these structural design specifications to the structural engineer for verification:

Product Weight	680 kg (1500 lbs)
Product Height from Ground	2160 mm (85 in)
Product Width	1000 mm (40 in)
Product Frontal Area	Height * Width
CG Height	- 1000 mm (40 in)
Number of Anchor Bolts	4
Bolt Pattern	See images in this section
Anchor Bolt Size	M16 (5/8 in)
Anchor Bolt Embedment	229 mm (9 in)

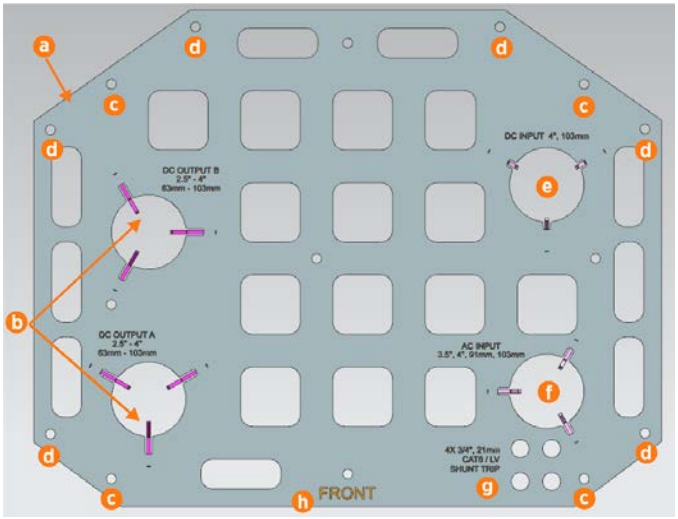
Power Block input and output cables can either be run under the grade surface in trenches, or they can be run along the grade surface and protected by wireways, as described in this section and Mounting Specifications for Surface Mount (page 11).

The Power Block has its own Concrete Mounting Template (CMT), which ships separately. It is assembled onsite just before pouring concrete.



a. Plates (x2)
b. Anchor bolts (x4) with fasteners (x8)
c. Rigid spacers (x9)

An overview of Power Block conduit and cable entry locations is shown below.



a. Power Block Concrete Mounting Template (CMT)
b. DC output options: 200, 250, 350, or 500 A; up to 103 mm (4 inch trade size) conduit each
c. M16 (5/8 in) anchor bolts (x4) with 76 mm (3 in) above concrete
d. Surface Conduit Entry anchor positions (optional: x2 left, x2 rear, or x2 right)
e. DC auxiliary input (requires optional package): 103 mm (4 inch trade size) conduit
f. AC input: up to 103 mm (4 inch trade size) conduit
g. Low voltage DC and Cat6 Shielded Twisted Pair (STP) Ethernet options, 21 mm (3/4 inch trade size) conduit (x4):
    - Shunt trip, if present (x1)
    - 1 Ethernet, 1 LV out: (x1)
    - 2 Ethernet, 1 or 2 LV out: (x2)
    - 3 Ethernet, 1 or 2 LV out: (x3)
h. Front of enclosure (top view)

Note: For maximum wire and ground sizes and their minimum conduit sizes, see Conduit and Wiring Requirements (page 21).

Note: If two pairs of conductors are running to the same Power Link from a Power Block, conductors must be routed with bus A + and - in one conduit, and Bus B + and - in the other.

Power Link

Conservative stability specifications for the station are listed below for the following design scenarios:

1. 170mph wind, high seismic, Class 3 Soil
2. 170mph wind, high seismic, Class 4 Soil
3. 170mph wind, high seismic, Class 5 Soil
4. 140mph wind, lower seismic, Class 3 Soil
5. 140mph wind, lower seismic, Class 4 Soil
6. 140mph wind, lower seismic, Class 5 Soil

All scenarios assume:

- Minimum concrete rating of 2500 PSI
- An A1 anchor bolt embedment of 9 inches using 5/8 inch all-threaded rod (ASTM F1554 Gr. 55) anchor rod with HIT-HY 200 adhesive

Design	B1, Width	B2, Width	T, Thickness	#N1 @ S1" O.C. Top Rebar	#N2 @ S2" O.C. Bottom Rebar
1	1499 mm (59 in)	1499 mm (59 in)	432 mm (17 in)	#4 @ 305 mm (12 in) O.C.	#4 @ 305 mm (12 in) O.C.
2	1499 mm (59 in)	1499 mm (59 in)	610 mm (24 in)	#5 @ 305 mm (12 in) O.C.	#5 @305 mm (12 in) O.C.
3	1499 mm (59 in)	1499 mm (59 in)	610 mm (24 in)	#5 @ 305 mm (12 in) O.C.	#5 @ 305 mm (12 in) O.C.
4	1219 mm (48 in)	1219 mm (48 in)	330 mm (13 in)	#4 @ 305 mm (12 in) O.C.	#4 @ 305 mm (12 in) O.C.
5	1219 mm (48 in)	1219 mm (48 in)	483 mm (19 in)	#5 @ 305 mm (12 in) O.C.	#5 @ 305 mm (12 in) O.C.
6	1219 mm (48 in)	1219 mm (48 in)	483 mm (19 in)	#5 @ 305 mm (12 in) O.C.	#5 @ 305 mm (12 in) O.C.

The concrete pad for the station must either be designed to be site-specific, or must meet the specifications above. In some extreme conditions, a larger pad would be required. For sites with less stringent seismic, soil, or wind conditions, a smaller pad might be possible.

If the existing pad does not meet the specifications above, it must be inspected and approved by a structural engineer for each component's dimensions and weight.

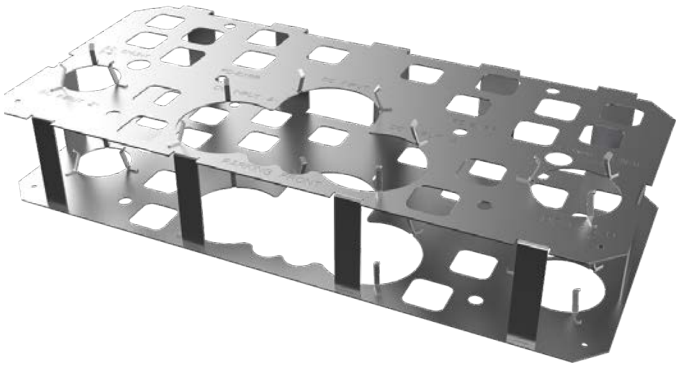
The station mounting points depend on the method of installation:

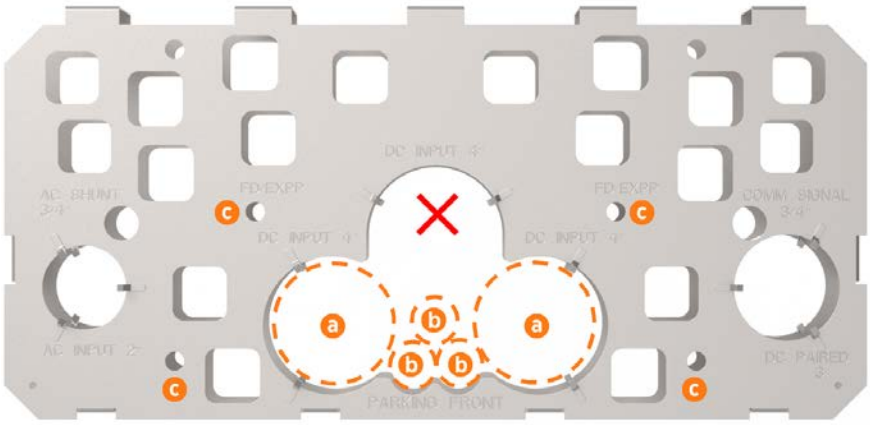
- Wall or other vertical mount
- Pedestal mount, with underground anchors and conduit
- Pedestal mount, with surface conduit entry and surface-drilled anchor bolts

Power Link service wiring enters from the bottom of the enclosure or from the back. In all cases, the maximum required wiring and conduit entries use the maximum conduit sizes listed above.

Note: This conduit layout reflects the largest conduit options. See the Power Block section with wiring size options for more information.

For pedestal mounting, Power Link stations use the DC Universal CMT, which also fits other DC fast charging stations such as the Express 250 and can be used as an upgrade path. This CMT is embedded in a newly poured concrete pad to position both the anchor bolts and the conduit stub- ups detailed above.





a. DC conductors: up to 103 mm (4 inch trade size) conduit each
b. 48 VDC and Cat6 Shielded Twisted Pair (STP) Ethernet: 21 mm (3/4 inch trade size) conduit
c. Power Link anchor bolts (x4) with 76 mm (3 in) above concrete

Note: Low voltage lines can be routed in the same conduit as Ethernet, if the wires are routed to the same location.

Note: Only round openings in the CMT are functional. Square CMT openings allow concrete flow.

Mounting Specifications for Surface Mount

Power Blocks and Power Links support wiring that is run above ground in protected wireways, for locations where no underground wiring access exists (parking garages, etc.) or where underground junction boxes are not permitted.

If cables are run above grade, they must be housed in wireways that conform to local code. Use a ChargePoint approved surface mount solution for the following benefits:

- Support of the weight of conduits and components without compromising cover panel integrity
- Ensure all terminations meet ingress requirements where they meet the component
- No obstructions to ventilation, which is required during operation

To prepare the site for above grade wiring:

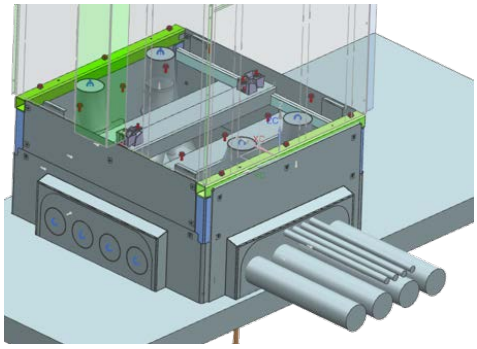
- Ensure the plans for the concrete pad and access area allow full service access to all components. Surface conduit entry might require larger clearance areas than embedded installations, as described in later sections.
- Prepare the concrete surface where the components will be anchored so that the concrete is solid and smooth, with no old hardware or stub-ups extending above grade. The Power Block and Power Links anchor to the concrete using epoxied bolts and require a level mounting surface.
- Highly flexible wire is recommended, to minimize bend radius.

Power Block

Use the Power Block dimensions listed above to allow space and to calculate the locations of anchor bolts to be drilled and epoxied before installation. Include the two anchor bolts for whichever side will house the surface conduits.

The Power Block can be installed with a pedestal cover panel (only one: left side, rear, or right side) that is sturdy enough to fasten to surface conduit. A surface mount cover panel has guide holes to drill out the correct size openings for that site's conduits per the site drawings.

Note: The image shows examples of positioning only. All conduit for a Power Block must enter through a single face. Arranging input and output on opposite sides for rows of Power Blocks is not supported.



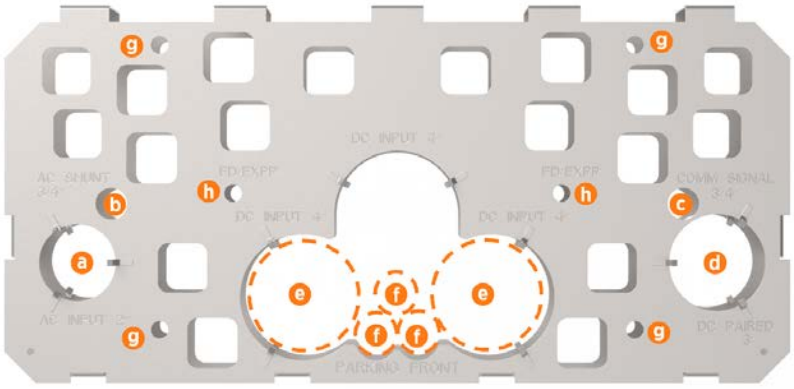
Power Link

A pedestal-mount Power Link also accepts Surface Conduit Entry. The surface conduit can enter from the pedestal back, or approach from one side and use a 90 degree elbow to join the pedestal back. Use a ChargePoint approved surface mount template to correctly align anchor bolt locations for drilling and epoxy. The maximum conduit sizing must still align with the values described in Mounting Specifications for Pads (page 7).

Installing Express 250 Stations for Later Power Link Replacement

The DC Universal CMT allows a site to install Express 250 stations now, for later upgrade to Power Links. To use this upgrade path:

1. Install ALL conduits for both current AND future stations in the concrete now, per site drawings. Future conduit stub-ups must protrude 25 mm (1 in) above grade, but not higher than 33 mm (1.3 in), to prevent interference with the current station. Cap all future conduit. Conduits include:



   a. Express 250 AC input
   b. Express 250 shunt trip (optional)
   c. Express 250 Ethernet (Paired installations only)
   d. Express 250 DC (Paired installations only)
   e. Power Link DC input
   f. Power Link 48 V/ Ethernet Cat6 STP connections (varies by site)

2. Install anchor bolts in the CMT in the correct position for the Express 250 station only (callout g).
3. Do not pull future wires until the stations are being exchanged.

In the future, when the station is exchanged:

1. Cut the old rear anchor bolts (g) to grade level.
2. Remove the old wiring.
3. Cut the old stub-ups (a-d) to grade level and seal them to prevent pest ingress.
4. Use a ChargePoint-provided surface mount template to drill and epoxy new rear anchor bolts in place (h). Refer to the Express Plus Installation Guide for the complete procedure.

Drainage

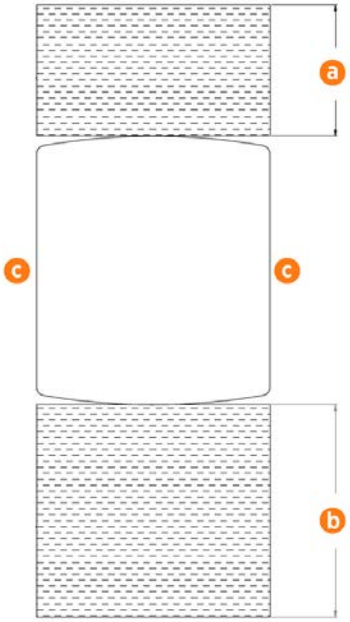
Ensure any site slopes, walls, or fencing do not trap water around the installation site. The system is only built to withstand 457 mm (18 in) of standing water.

WARNING: Exposing the ChargePoint® charging components to over 457 mm (18 in) of standing water could create an electrocution, shock, or fire hazard. Cut power to the component if it has been exposed to standing water and contact ChargePointbefore the component is powered on.

Clearances

Power Block

The Power Block requires minimum site and service clearances as listed below.



a. Rear: 457 mm (18 in) required, 610 mm (24 in) recommended
b. Front: 1000 mm (39.3 in)
c. Sides: 51 mm (2 in) (measured from the exterior of each side cover panel)

Front and rear clearances must be at grade level +/- 13 mm (0.5 in).

The interior of the Power Block is accessed from both the front and rear cover panels, which lift off. No separate door swing clearance is required.

Fencing, bollards, or wheel stops must not encroach upon the clearances listed above, if present. These barriers are not explicitly required by ChargePoint.

Power Blocks can be laid out side by side, or back to back with minimal spacing for service and ventilation.

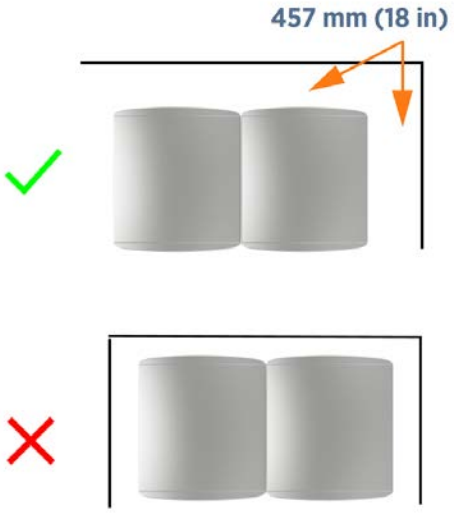
If Power Blocks are laid out side by side, wiring can enter from the rear or outside face, using either surface entry or (recommended) bottom entry. However, when units are side by side, wiring for the row cannot pass through one unit into another.

Note: A Power Block cannot be positioned more than 100 m (328 ft) from any of its associated stations because of Ethernet communication restrictions.

Side clearances can be shared between Power Blocks as long as:

- Front and rear clearances are maintained
- At least 457 mm (18 in) of clearance exists at each end of a row of Power Blocks

- Access to the back of each Power Block exists for maintenance



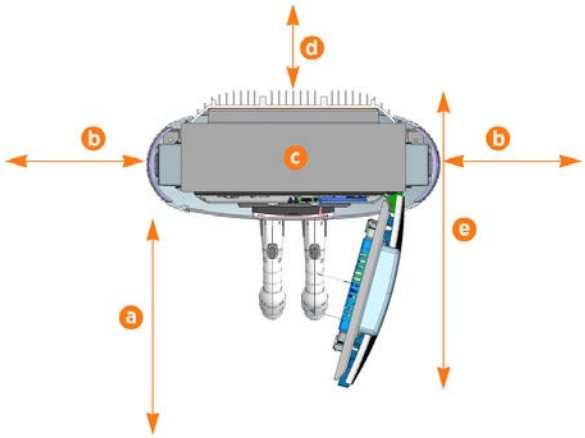
For any questions about allowable layouts, contact ChargePoint.

Check local and regional code for any additional clearance requirements regarding safety, high voltage equipment, disability requirements, etc.

Note: Each Power Module weighs 45 kg (98.5 lbs). Service for each Power Block requires either two technicians, or a level, rollable surface for service carts to remove and replace Power Modules.

Power Link

The Power Link requires minimum site and service clearances as listed below.



a. Front clearance: 610 mm (24 in) minimum open space
b. Side clearance: 305 mm (12 in)*
c. Top clearance: 305 mm (12 in)
d. Rear clearance: 203 mm (8 in) only required for CMK installation and servicing**
e. Door swing plus station width: 730 mm (28.7 in)

* Side clearance is measured from top corner to top corner. Side clearance can be shared between two Power Links.

**All operation and service for the Power Link is performed from the front. No rear clearance is required unless a CMK is installed.

Bollards and Wheel Stops

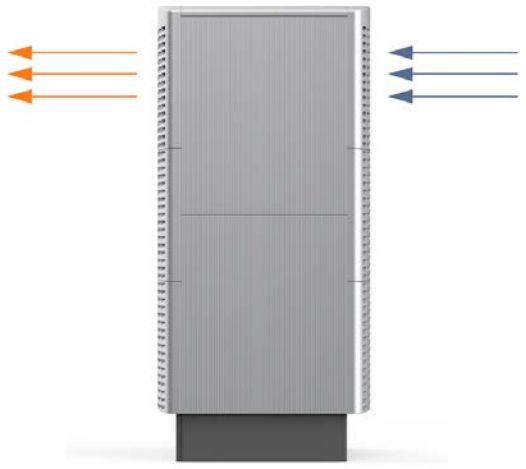
Bollards and wheel stops are not explicitly required by ChargePoint. However, ChargePoint recommends these best practices and considerations when designing the site:

- Permanent bollards or wheel stops must not encroach upon the clearances listed in the clearance diagrams in this section. Removable bollards are allowed if service personnel have the ability to move them as needed.
- Where permitted by code, wheel stops are preferred over bollards for head-in or back-in spaces.
- When using wheel stops, consider the average vehicle overhang distance for the largest type of vehicle (passenger, bus, etc.), as well as leaving space for the driver to walk up and access the station.
- When bollards are required by code, needed for snowy areas, or needed for curbside spaces, ensure bollard placement does not interfere with removing and replacing charge cables in the station's holsters.
- Try to minimize bollard interference with the movement of charge cables between the station and the vehicle. Bollard height is recommended to be no higher than 914 mm (36 in) where needed.

Ventilation

Ensure that any installation, especially an indoor installation, has adequate airflow to dissipate heat at maximum operation. The charging location must allow fresh ambient airflow. Do not install a charging component where it is exposed to air that is heated above ambient temperatures. Restriction of airflow, or temperatures outside the operating range, might result in reduced maximum performance.

Intake vents are positioned at the front of the Power Block (blue arrows), and exhaust vents are at the rear (orange arrows). When positioning multiple Power Blocks, orient intake and exhaust to avoid recirculation.



Signage

Refer to local and regional code to design the following elements for the site:

- Any required re-striping of parking spaces
- EV or Accessible EV signs
- EV or Accessible EV paint markings on and around the parking spaces

Electrical Design 3

The default Express Plus installation requires service wiring installed underground. (If a site requires surface mounting, contact ChargePoint before beginning work, to obtain an approved installation method.) Conduit and wire size are determined based on the length of runs from the electrical panel to the station location. Service wiring in conduit, or armored cable, must be run as required to comply with local electrical codes. Consult national and local codes or a project engineer to determine the grade, quality, and size of the conduit or cable.

The Power Block is available in 200, 250, 350, and 500 A versions, each with its own fuses and rating labels.

Note: All wiring and conduit is supplied by the contractor unless otherwise indicated.

Upstream Components

Charging stations are considered continuous load devices (EVs draw maximum load for long durations). Therefore, electrical branch circuits to EV chargers must be sized at 125% of the load on each leg of a 3-phase panel for North American installations, in accordance with National Electric Code requirements. For other regions, refer to local code.

When planning multiple EV charging stations, it is best practice to segment non-continuous and continuous loads, with all branch circuits for EV charging on a dedicated electrical panel assembly with adequate circuit breakers. When sizing new electrical panels dedicated for EV charging, all branch circuits must support continuous load.

Each Power Block requires its own service panel breaker as follows:

	Input Current Rating	Recommended Overload Protection	Minimum Circuit Breaker Size
400 V (EU)	315 A	370 A*	400 A
480 V (N. America)	260 A	325 A**	350 A

*Adds 5% to current at low line conditions

**The overload setting for North America is fixed at 125% of continuous rated current

WARNING: In areas with frequent thunderstorms, add surge protection at the service panel for all circuits. Use new circuit breakers only.

Used breakers can damage equipment and introduce the potential for an electrical fire.

Ensure all power and ground connections, especially those at the breaker and bus bar, are clean and tight. Remove all oxide from all conductors and terminals before connecting wiring.

The Power Link charging station is tested to IEC 61000-4-5, Level 5 (6 kV @ 3000 A) standards.

AC Disconnect Switch

A local AC disconnect switch, separate from the shunt trip wiring, is recommended to be installed between each Power Block and the electrical panel. This is especially important if the main electrical panel or utility room is distant, out of line of sight, or has restricted access. For North America installations, refer to disconnect switch requirements per NEC Article 625, “Electric Vehicle Charging and Supply Equipment Systems”.

Transformer Configuration

Refer to the following tables to configure electrical service.

	North America	Europe
Input Rating	480 VAC, 3-phase, 260 A, 60 Hz	400 VAC, 3-phase, 310 A, 50 Hz
Electrical Service Configuration	277/480 3-phase plus ground, grounded WYE (Y) configuration*	230/400, 3-phase plus ground, grounded WYE (Y) configuration*
Product Connection	3-phase 480 plus ground (neutral not used)	3-phase 400 plus protective earth (neutral not used)
Harmonic Current Rating	K factor 4	K factor 4

*Delta (floating or grounded) is not supported

Grounding/Earthing Requirements

- The Power Block must be connected to a grounded, metal, permanent wiring system.
  - North America: A service ground conductor must be run with circuit conductors and connected to an equipment-grounding terminal on the Power Block.
  - Europe: Use TN-S or TN-C-S configurations. (TT is not recommended because it requires RCDs.)
- Ensure a grounding conductor that complies with local codes is properly grounded to earth at the service equipment or, when supplied by a separate system, at the supply transformer.

- The Power Block must be connected to a grounded, metal, permanent wiring system. An equipment-grounding conductor must be run with circuit conductors and connected to an equipment-grounding terminal or lead on the Power Link.
- All charging components must be bonded to one another in sequence: either Power Block to Power Link, or Power Block to distribution cabinet (if used) to Power Link.
- Some regions also require a grounding rod to be installed adjacent to each component. Check local code to ensure compliance.

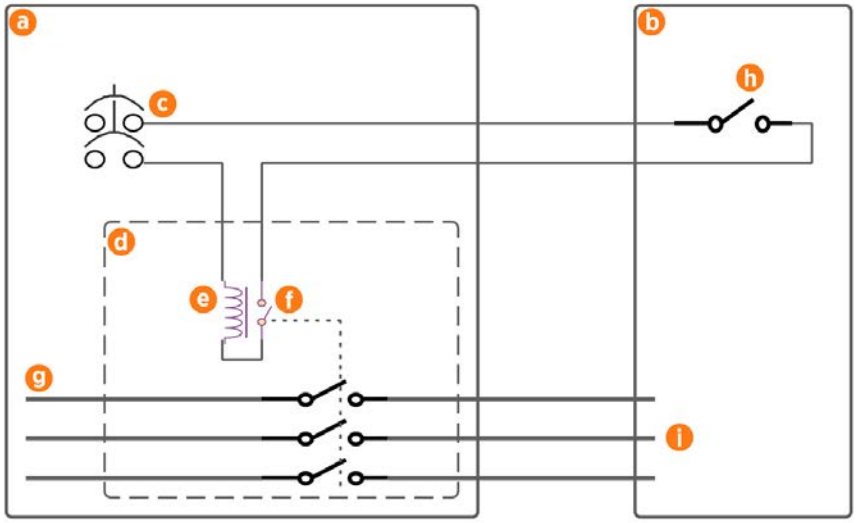
Shunt Trip Wiring

The Power Block provides a set of unpowered (dry) contacts to connect to an optional shunt trip device. These contacts are rated to 240 VAC and 6 amps.

Wiring sections to and from the Power Block are deactivated when unsafe conditions are detected, such as unintended cover panel removal. A breaker reset is required any time the shunt trip is activated.

If installed, each Power Block must be wired to the shunt trip unit of its own upstream circuit breaker. Upstream AC power must be shut off at the panel to remove shock risk inside the Power Block. All shunt trip behavior is already hard-coded into the charging station and has no programmable variables.

Emergency stop devices are governed by local and regional codes and may be required in some sites. If one is required by code or by the site, confirm specifications with your ChargePoint representative.



a. Electrical panel
b. Power Block
c. Control voltage supply, maximum 240 VAC
d. Shunt trip circuit breaker
e. Shunt trip coil
f. Auxiliary contacts (closed when main contacts are closed)
g. Three-phase AC main

h. Power Block shunt trip contacts, Normally Open (inside the auxiliary power supply, accessible on field wiring terminal block)

i. Three-phase Power Block AC input

Use a shunt trip breaker that has a set of auxiliary contacts wired in series with the shunt trip coil. The auxiliary contacts are closed when the breaker is closed. Once the breaker is tripped, the contacts open and stops current flow in the shunt coil. The shunt coil is not meant for to be activated for extended periods.

Maintenance Switch

ChargePoint strongly recommends selecting the maintenance switch option on each Power Link for fleet implementations, to improve system uptime during maintenance. For Power Links that do not have an internal or external DC disconnect switch, servicing the station requires the Power Block upstream to be powered off. This can affect system uptime and fleet scheduling.

Power Links have two options for disconnecting DC power. The station can be purchased with an optional maintenance switch already installed in the station body, or an external switch can be added between each Power Link and its Power Block if preferred. External DC disconnect switches are required to have Normally Closed (NC) contact feedback wired into the Power Link.

For stations with the internal maintenance switch, the disconnect feedback positively conveys to the Power Link that the DC connection is open upstream, and the unit can be serviced safely.

If the Power Link detects its door is opening but the disconnect status is absent, or the disconnect is closed, the station signals the upstream Power Block to disable its output to prevent a shock hazard. The system software keeps the Power Block outputs disabled until the site owner clears all needed safety checks.

Conduit and Wiring Requirements

For full product specifications, refer to the Express Plus Datasheet. Using that data, ensure the installation location is equipped with service wiring that supports the Express Plus site's power requirements:

Important: All AC and DC conductors landing on ChargePoint equipment shall be copper or aluminum, and rated to 90°C (194°F) minimum. All 48 VDC conductors must be rated to 75°C (167°F) minimum and 90°C (194°F) is recommended.

In regions that use conduit, the outer diameter of conduit must not exceed the sizes called out in the conduit layout drawing below.

In regions that do not use conduit, armored cable may be laid in the same configuration to conform to the wire placement on mounting templates.

Note: For North American installations, per UL 2202, overhead configurations must use no more than 3 conductors per pole, and those three conductors cannot be larger than 85 mm2 (3/0 AWG). Reference UL code for wire bend limitations for 203 mm (8 in) of available space.

Notes for all wiring regions:

- Use one input feed per Power Block.
- The maximum wiring run length is 100 m (328 ft) between aPower Block and each of its Power Links for DC conductors, 48 V wiring, and Ethernet.
- 48 VDC wiring must be rated for 600 V.
- Power Link conduit must be sealed to the station gland plate to maintain a Pollution Degree 2 environment.
- Ethernet communication between Power Blocks and Power Links must be Cat6 Shielded Twisted Pair (STP) cable, with the shield wire terminated at both ends. Lesser grades of cable do not have the required noise immunity.
- All sizes are generic and provided for reference only. The installation contractor must perform site-specific wire sizing, taking into account run length, site conditions, and applicable codes.

Maximum Wiring Sizes

Note: This table reflects the largest possible wire sizes in each case. All sizing assumes a maximum ambient temperature of 50°C (122°F). Actual wire sizing and types should be designed to be site-specific.

48 VDC Power

Type	Input Current Rating	Input Voltage Rating	Size	Minimum Conduit Size
48 VDC	10 A	600 VDC	16 mm2 (6 AWG)	21 mm (3/4 inch trade size)

AC Input, Copper

Note: Aluminum AC input sizing does not meet minimum bend radius restrictions.

Type	Input Current Rating	Conductors Per Pole	Size	Ground	Minimum Conduit Size
AC input (THHN)	260 A 480 VAC	1	400 mm2 (750 kcmil)	27 mm2 (3 AWG)	89 mm (3.5 in trade)
		2	185 mm2 (350 kcmil)	27 mm2 (3 AWG)	89 mm (3.5 in trade)
		3	120 mm2 (4/0 AWG)	27 mm2 (3 AWG)	76 mm (3 in trade)
		4	120 mm2 (4/0 AWG)	27 mm2 (3 AWG)	89 mm (3.5 in trade)

DC Output, Copper

Type	Input Current Rating	Conductors Per Pole	Size	Ground	Minimum Conduit Size
DC output (XHHW)	500 A	1	--	--	--
		2	--	--	--
		3	240 mm2 (500 kcmil)	55 mm2 (1/0 AWG)	102 mm (4 in trade)
		4	185 mm2 (350 kcmil)	55 mm2 (1/0 AWG)	102 mm (4 in trade)
	350 A	1	--	--	--
		2	240 mm2 (500 kcmil)	35 mm2 (2 AWG)	76 mm (3 in trade)
		3	185 mm2 (350 kcmil)	35 mm2 (2 AWG)	76 mm (3 in trade)
		4	120 mm2 (4/0 AWG)	35 mm2 (2 AWG)	76 mm (3 in trade)
	300 A	1	--	--	--
		2	240 mm2 (500 kcmil)	27 mm2 (3 AWG)	89 mm (3.5 in trade)
		3	120 mm2 (4/0 AWG)	27 mm2 (3 AWG)	76 mm (3 in trade)
		4	95 mm2 (3/0 AWG)	27 mm2 (3 AWG)	76 mm (3 in trade)
	250 A	1	400 mm2 (750 kcmil)	27 mm2 (3 AWG)	76 mm (3 in trade)
		2	185 mm2 (350 kcmil)	27 mm2 (3 AWG)	76 mm (3 in trade)
		3	95 mm2 (3/0 AWG)	27 mm2 (3 AWG)	64 mm (2.5 in trade)
		4	70 mm2 (2/0 AWG)	27 mm2 (3 AWG)	64 mm (2.5 in trade)
	200 A	1	240 mm2 (500 kcmil)	25 mm2 (4 AWG)	64 mm (2.5 in trade)
		2	120 mm2 (4/0 AWG)	25 mm2 (4 AWG)	64 mm (2.5 in trade)
		3	55 mm2 (1/0 AWG)	25 mm2 (4 AWG)	64 mm (2.5 in trade)
		4	50 mm2 (1 AWG)	25 mm2 (4 AWG)	64 mm (2.5 in trade)

DC Output, Aluminum

Type	Input Current Rating	Conductors Per Pole	Size	Ground	Minimum Conduit Size
DC output (XHHW)	500 A	1	--	--	--
		2	--	--	--
		3	--	--	--
		4	--	--	--
	350 A	1	--	--	--
		2	400 mm2 (750 kcmil)	55 mm2 (1/0 AWG)	102 mm (4 in trade)
		3	185 mm2 (350 kcmil)	55 mm2 (1/0 AWG)	89 mm (3.5 in trade)
		4	185 mm2 (350 kcmil)	55 mm2 (1/0 AWG)	102 mm (4 in trade)
	300 A	1	--	--	--
		2	400 mm2 (750 kcmil)	50 mm2 (1 AWG)	102 mm (4 in trade)
		3	185 mm2 (350 kcmil)	50 mm2 (1 AWG)	89 mm (3.5 in trade)
		4	120 mm2 (4/0 AWG)	50 mm2 (1 AWG)	76 mm (3 in trade)
	250 A	1	500 mm2 (1000 kcmil)	50 mm2 (1 AWG)	76 mm (3 in trade)
		2	240 mm2 (500 kcmil)	50 mm2 (1 AWG)	76 mm (3 in trade)
		3	120 mm2 (4/0 AWG)	50 mm2 (1 AWG)	76 mm (3 in trade)
		4	95 mm2 (3/0 AWG)	50 mm2 (1 AWG)	76 mm (3 in trade)
	200 A	1	400 mm2 (750 kcmil)	35 mm2 (2 AWG)	76 mm (3 in trade)
		2	185 mm2 (350 kcmil)	35 mm2 (2 AWG)	76 mm (3 in trade)
		3	95 mm2 (3/0 AWG)	35 mm2 (2 AWG)	64 mm (2.5 in trade)
		4	55 mm2 (1/0 AWG)	35 mm2 (2 AWG)	64 mm (2.5 in trade)

North American Requirements

	Inputs to Power Block			Power Block to Distribution Box			Distribution Box to Each Power Link		
	AC and Gnd	DC	Shunt Trip / EPO	HVDC Output	48 VDC Output	Ethernet	HVDC Output	48 VDC Output	Ethernet
Circuit Voltage	480 VAC	500~ 750 VDC	< 240 V	200- 1000 V	48 V	--	200 - 1000 V	48 V	--
Max Current	260 A	400 A	6 A	200, 250, 350, or 500 A	10 A	--	200, 250, 350, or 500 A	10 A	--
Notes	L1, L2, L3, Gnd	Option		2 outputs	Rated for 600 V	Cat6 STP		Rated for 600 V	Cat6 STP

UK and European Requirements

	Inputs to Power Block			Power Block to Distribution Box			Distribution Box to Each Power Link		
	AC and Gnd	DC	Shunt Trip / EPO	HVDC Output	48 VDC Output	Ethernet	HVDC Output	48 VDC Output	Ethernet
Circuit Voltage	400 VAC	500~ 750 VDC	< 240 V	200- 1000 V	48 V	--	200- 1000 V	48 V	--
Max Current	315 A	400 A	6 A	200, 250, 350, or 500 A	10 A	--	200, 250, 350, or 500 A	10 A	--
Notes	3p+E	Option		2 outputs	Rated for 600 V	Cat6 STP		Rated for 600 V	Cat6 STP

Cellular Connectivity

A consistently strong cellular signal is needed before installers can activate the station. Weak or sporadic signal can affect crucial aspects of the charging station, including:

- Accuracy in reporting
- Ability for drivers to use their mobile app

- Ability for customer support to troubleshoot problems
- Support for advanced features such as Power Management or Waitlist

Strong signal is also required for the ChargePoint Assure maintenance and management programs.

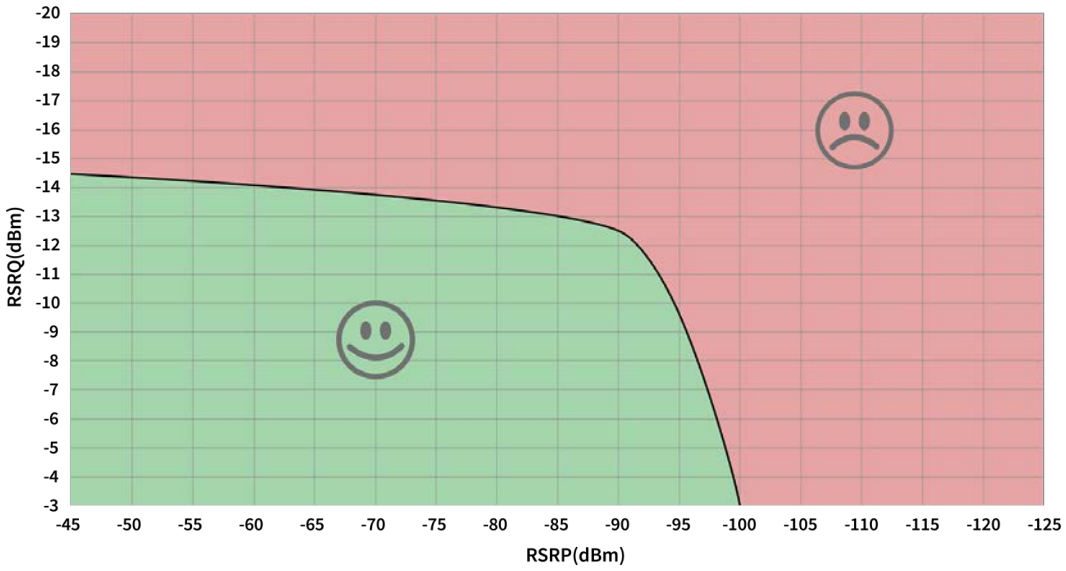
ChargePoint stations use cellular data connections to reach ChargePoint Cloud Services. This allows secure, PCI-compliant data connections without requiring any other form of internet connectivity at an install site or imposing additional network management responsibilities on a site host.

Each station has its own cellular connection.

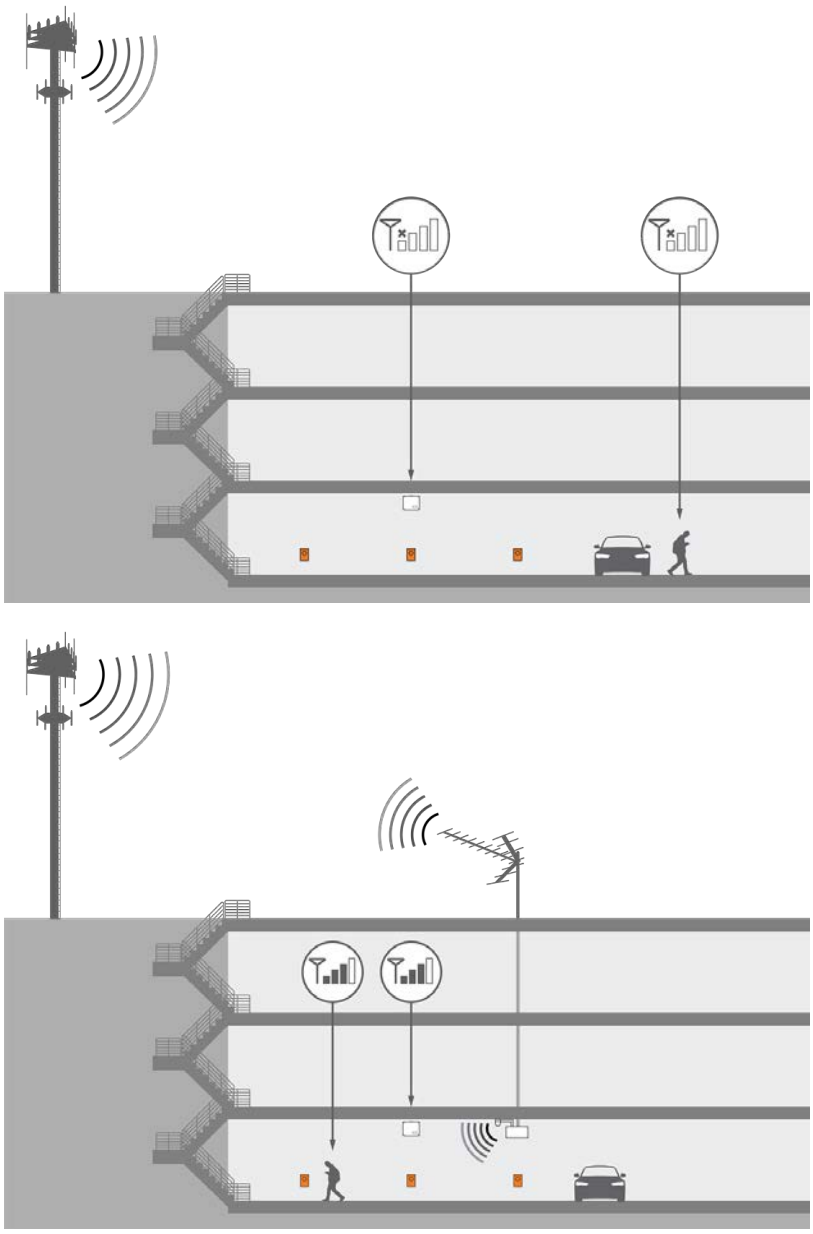
Signal Strength and Quality

Use a cellular signal detection device (such as a Siretta Snyper LTE or equivalent) to take signal strength readings at the exact proposed charging station or gateway locations.

For stations using LTE, test the location of every station and ensure it meets minimum RSRQ at -12.5 dB or better, for RSRP measured at -90 dBm or better. Refer to the graph for acceptable combinations. Note that these numbers are all negative, so -70 dBm is stronger than -85 dBm, and -90 dBm is weaker.



If the signal strength is weaker than this, take cellular readings at the location where any cellular signal booster antennas will be installed. Ensure enough signal exists for that repeater model. Install repeaters to boost the strength of the cellular signals. Repeaters are often required when installing charging stations in an underground garage or enclosed parking structure.



In North American regions, ChargePoint products all support LTE bands 2, 4, and 5. The most commonly supported carriers to check during site evaluation are:

- US: AT&T, T-Mobile, Verizon
- Canada: Rogers, Telus, and Bell

In European regions, ChargePoint products all support LTE bands 1, 3, 7, 8, and 20. 900 and 1800 MHz are also supported for 2G fallback. Partners vary by country.

For other regions, or if the site does not have strong signal on these bands, contact your ChargePoint representative for additional solutions.

ChargePoint strongly recommends a consultation with a cellular connectivity specialist before all installations. A consultation can verify:

- Service with a supported carrier on a supported LTE band
- Available signal and local noise levels on applicable bands
- Site changes to correctly meet your needs-- both for station bandwidth needs and other phone coverage for customer or tenant satisfaction

Repeaters

Some sites require repeaters to ensure strong signal to all stations. If a repeater is required, look for a model with these features:

- Specifically LTE compatible on the listed bands
- Multi-carrier
- Multi-band
- Not already dedicated to FirstNet or other first responder-specific networks
- Auto-gain recommended

Note: Do not rely on readings taken with a cell phone when conducting site surveys. Many signal boosters and network extenders may not be compatible with ChargePoint hardware, including certain types of Distributed Antenna Systems (DAS), micro/nano/pico/femto-cells, and carrier- or band-specific signal boosters.

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.

FCC Compliance Statement

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

Important: Changes or modifications to this product not authorized by ChargePoint, Inc., could affect the EMC compliance and revoke your authority to operate this product.

Exposure to Radio Frequency Energy: The radiated power output of the 802.11 b/g/n radio and cellular modem (optional) in this device is below the FCC radio frequency exposure limits for uncontrolled equipment. The antenna of this product, used under normal conditions, is at least 20 cm away from the body of the user. This device must not be co-located or operated with any other antenna or transmitter by the manufacturer, subject to the conditions of the FCC Grant.

Industry Canada

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter

FCC/IC Compliance Labels

Visit chargepoint.com/labels

chargepoint.com/support

75-001359-01r3

Attachment 2 – ChargePoint Documentation

Part B – "Express Plus, DC Fast Charging Platform, Installation Guide"

FOR

COUNTY OF NEVADA
STATE OF CALIFORNIA

Electric Bus Charging Project
Nevada County Operations Center (NCOC) Phase-1

COUNTY PROJECT NO. 889830

California Air Resources Board (CARB) Grant No. G20-NS-001

A sub-grant of U.S. Environmental Protection Agency 2019 and 2020 Targeted Air Shed Grant Program #TA98T15301-0 with CARB

Express Plus

DC Fast Charging Platform

Installation Guide

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

WARNING:

1. This guide contains important instructions you must follow to install, operate, and maintain the Express Plus DC fast-charging platform with Power Block model CPPB0001xxx and Power Link model CPPL0001xxx.
2. **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.
3. **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.
4. **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.
5. **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.
6. **This charging station is not suitable for use in Class 1 hazardous locations, such as near flammable, explosive, or combustible vapors or gases.**
7. **Supervise children near this device.**
8. **Do not put fingers into the electric vehicle connector (plug).**
9. **Do not use this product if any cable is frayed, has broken insulation, or shows any other signs of damage.**
10. **Do not use this product if the enclosure/exterior/housing or the electric vehicle connector is broken, cracked, or open, or shows any other signs of damage.**
11. **Use only copper conductor wire rated for 90°C.**

IMPORTANT: Under no circumstances will compliance with the information in this manual relieve the user of the responsibility to comply with all applicable codes or safety standards. This document describes approved installation and mounting scenarios. 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.**

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.com/guides or .

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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

Contents

Prepare for Installation 1

This Guide

Follow this guide to install the ChargePoint® Express Plus DC fast-charging platform.

You will need at least two people to install this system.

Components

Express Plus is a scalable solution to provide DC fast-charging for electric vehicles.

It consists of modular components that may vary with the design of each site.

Express Plus Power Link	Express Plus Power Block	Express Plus Power Module
charging station/dispenser • configurable cables • optional interactive display • mounts onto a standard pedestal (as shown) or overhead (wall or gantry)	power cabinet • centralizes power conversion • supplies DC power to Power Link • includes liquid cooling system for Power Modules	power electronics module • converts AC to DC power • modular, scalable design • fit up to five inside a Power Block
		

ChargePoint Cloud Dashboard
• online software for station owners and managers • communicates with Express Plus charging platform via cellular connectivity • supports remote diagnostics for station owners and managers and ChargePoint • includes functionality for station owners and managers to access and create reports • provides station owners and managers control of hardware settings and commands for users

CAUTION: Warranty Limitation

- If the charging station is not installed and 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 Cloud Dashboard.

WARNING: Do not install or service the charging station 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: Use low torque settings when working with power tools during installation or servicing. Over-torquing can damage the equipment.

IMPORTANT: Ensure the installation complies with all applicable codes and ordinances.

Access ChargePoint documents at chargepoint.com/guides .

Document	Content	Primary Audiences
Data Sheet	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
Concrete Mounting Template Guide	Instructions to embed the charging station template in a concrete pad with anchor bolts and conduit placement	Site construction contractor
Installation Guide	Anchoring, wiring, and powering on	Installer
Operation and Maintenance Guide	Operation and preventive maintenance	Station owner, facility manager, and technician

Document	Content	Primary Audiences
Service Guide	Component replacement procedures	Service technician
Declaration of Conformity	Statement of conformity with directives	Purchasers and public

Note: For all specifications other than dimensions and weights, refer to the product's Datasheet.

Questions

For assistance, contact ChargePoint Support (chargepoint.com/support) for your region.

Tools and Materials

The approved installer needs at least these tools and materials, which are not provided by ChargePoint:

- installation team of at least two people
- forklift
  - rated for ≥ 680 kg (1500 lb)
  - maximum size of forklift tines:
    - width = 102–127 mm (4–5 in)
    - maximum thickness ≤ 57 mm (2.25 in)

  Note: If your site has height constraints, you may need alternative equipment to install Power Block or Power Link.

- lock out/tag out equipment

- multimeter with CAT III 1000 V ratings, such as Fluke 87V or similar
- wire brush (to remove concrete from bolts)

- tools for cutting and terminating electrical conduits
- tools for cutting and terminating electrical cables

- standard electrical equipment
  such as wire cutters, wire strippers, and zip ties
- cable puller or fish tape
- Ethernet tester such as a Klein Tools VDV526-052 VDV LAN Scout Jr. Tester or similar
- hydraulic hole punch tool
  - 1.5 mm (1/16 in) steel punching capacity

- level

- measuring tape or other tool to measure height, length, and distance
- permanent marker
- duct seal compound
- stepladder
- cut-resistant gloves
- hard hat
- safety glasses

- headlamp
- broom and vacuum

- torque wrenches for 4 to 95 N·m (3 to 70 ft-lb)

- complete socket set, including deep sockets, up to 25 mm

- adjustable wrench

- Torx
  - T25 Torx driver
  - T30 Torx driver

- Torx security
  - T25 Torx security driver

- Phillips screwdriver
  - #2 Phillips screwdriver with long handle
  - #3 Phillips screwdriver
  - #5 Phillips screwdriver
  - right angle/90° #5 Phillips screwdriver

- flathead screwdriver

- isopropyl wipes and towel roll

- coolant funnel
- 2 gal coolant
- padlock provided by station owner if required (for security panel on Power Block)

- AC and ground conductors as required by site drawings
- DC conductors as required by site drawings
- 48 V DC wiring as required by site drawings
- shunt trip wiring (if on site drawings)

- Power Block DC and AC lugs:
  - plated copper compression lugs (not mechanical)
  - M12 (0.5 in) hole size
  - 44.5 mm (1.75 in) hole spacing
  - 2-hole specified for North America
  - maximum tongue width ≤ 50.8 mm (2 in)
  - **Note:** Check site drawings for quantity of lugs.
- Power Link DC lugs:
  - plated copper compression lugs (not mechanical)
  - M12 (0.5 in) hole size
  - 44.5 mm (1.75 in) hole spacing
  - 2-hole specified for North America
  - maximum tongue width:
    - ≤ 48 mm if 2 conductors per line
      or
    - ≤ 24.5 mm if 3 conductors per line
  - **Note:** Check site drawings for quantity of lugs.
- lug crimping tool and die compatible with lug size and manufacturer
  Note: Review the lug manufacturer's instructions for compatibility.
- torque paint pen
- Cat6 Shielded Twisted Pair (STP) Ethernet wiring
  Note: FTP, UTP, and lesser grades of cable do not have the required noise immunity
- Cat6 shielded connectors
- Cat6 crimping tool

- smartphone, tablet, or laptop that can scan and read a QR code

- Internet connection

- your ChargePoint user name and password

- exact location of stations or units, including parking space

Check Site Readiness

The Power Block and Power Link can be installed on either a newly poured pad or an existing concrete surface.

The Power Block and Power Link also support wiring run above ground for locations where no underground wiring access exists (such as parking garages) or where underground junction boxes are not permitted.

WARNING: If not installed correctly, the ChargePoint® charging station may pose a fall hazard, leading to death, personal injury, or property damage. Always use the provided Concrete Mounting Template shown preinstalled here, or a ChargePoint-approved surface mounting solution, to install the ChargePoint® charging station. Always install in accordance with applicable codes and standards using licensed professionals. Non approved installation methods are performed at the risk of the contractor and void the Limited One-Year Parts Exchange Warranty.

Before beginning work, check that the site meets these civil and mechanical requirements:

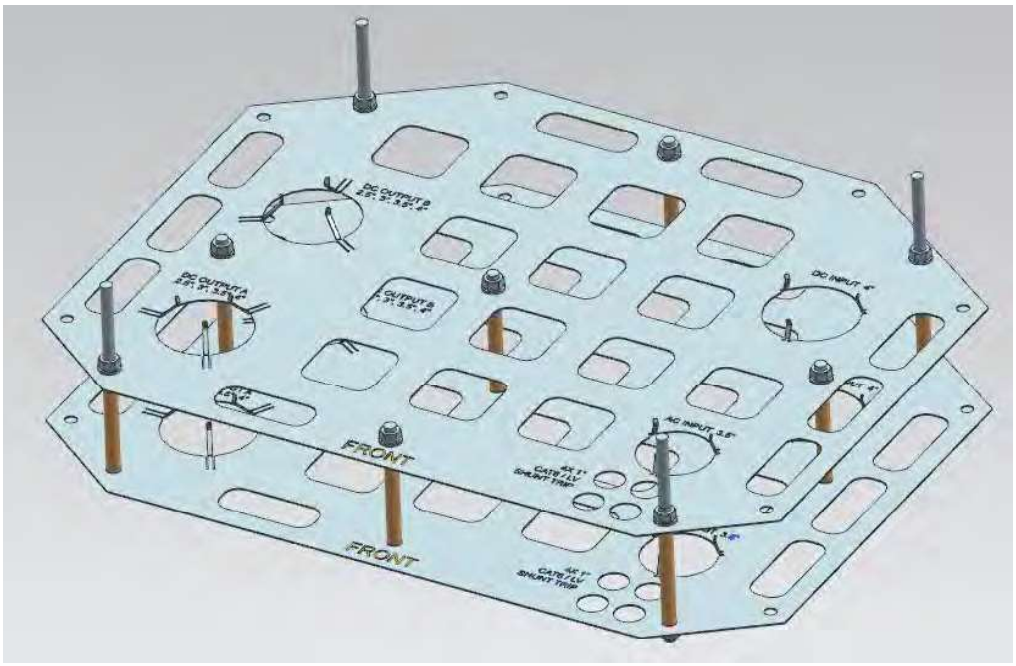
- Each concrete pad must be fully cured and smooth, and must not exceed a slope of 6.35 mm per 304.8 mm (~20 mm per m or ~0.25 in per ft).
- Each Power Block concrete pad has either a site drawing approved by a structural engineer for this specific site, or an existing concrete pad that has been approved by a structural engineer for the Power Block's dimensions and weight.
- Each Power Link pad must conform to the design requirements listed in the Express Plus *Site Design Guide.*
- Walls, fences, or slopes must not prevent water from draining from the pad.
- You have sufficient space around the installation pad to use a forklift and other lifting equipment, unpack crates, remove packing materials, and allow two people to freely move throughout the area.

IMPORTANT: Remove any concrete that is not level with the rest of the surface, or you cannot level the components. Use a grinder or a hammer and chisel to remove any bumps in the concrete.

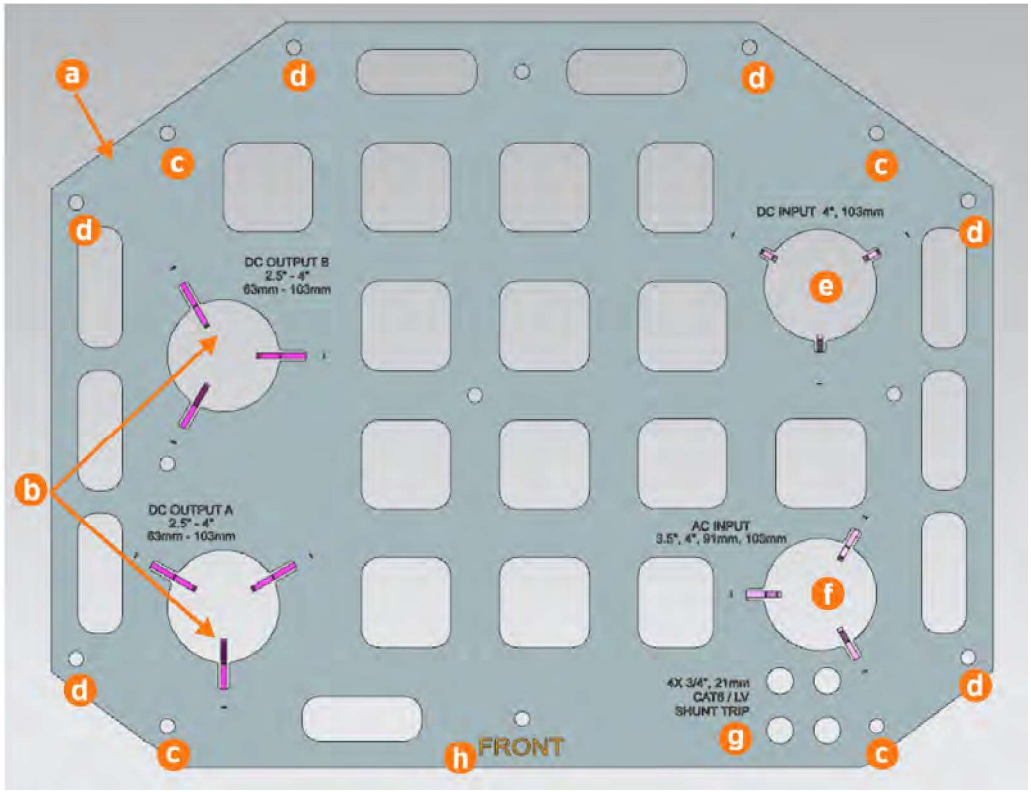
Power Block Readiness

Concrete Mounting Template (CMT)

The Power Block Concrete Mounting Template (CMT) should already be embedded in the concrete pad, unless the site is using a surface-conduit entry.



Verify the AC and DC conduits are positioned correctly.

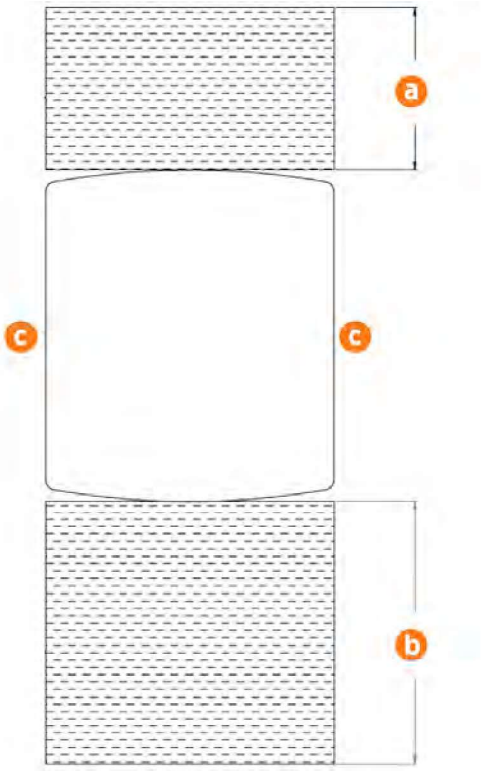


Power Block Conduit or Wiring	Description	Quantity
a. Power Block Concrete Mounting Template (CMT)	Check site drawings.	—
b. DC output conduit options	≤103 mm (4 in) trade size conduit each Check site drawings.	1 or 2
c. M16 anchor bolts	76 mm (3 in) above concrete	4
d. anchors for surface conduit entry (alternative configuration)	options (*one side only*): two left, two rear, or two right	2
e. DC auxiliary input conduit (requires optional package)	103 mm (4 in) trade size conduit	1
f. AC input conduit	≤103 mm (4 in) trade size conduit	
g. 48 V DC and Cat6 Shielded Twisted Pair (STP) Ethernet options:	21 mm (3/4 in) trade size conduit	1–4
i. Shunt trip, if present	Check site drawings.	1
ii. one Ethernet, one 48 V DC out	Check site drawings.	1
iii. two Ethernet, either one or two 48 V DC out	Check site drawings.	2
iv. three Ethernet, either one or two 48 V DC out	Check site drawings.	3
h. front of Power Block (security panel is at front)	top view	—

Note: For maximum wire and ground sizes and their minimum conduit sizes, see the Express Plus *Site Design Guide.*

Clearances

The Power Block requires minimum site and service clearances.



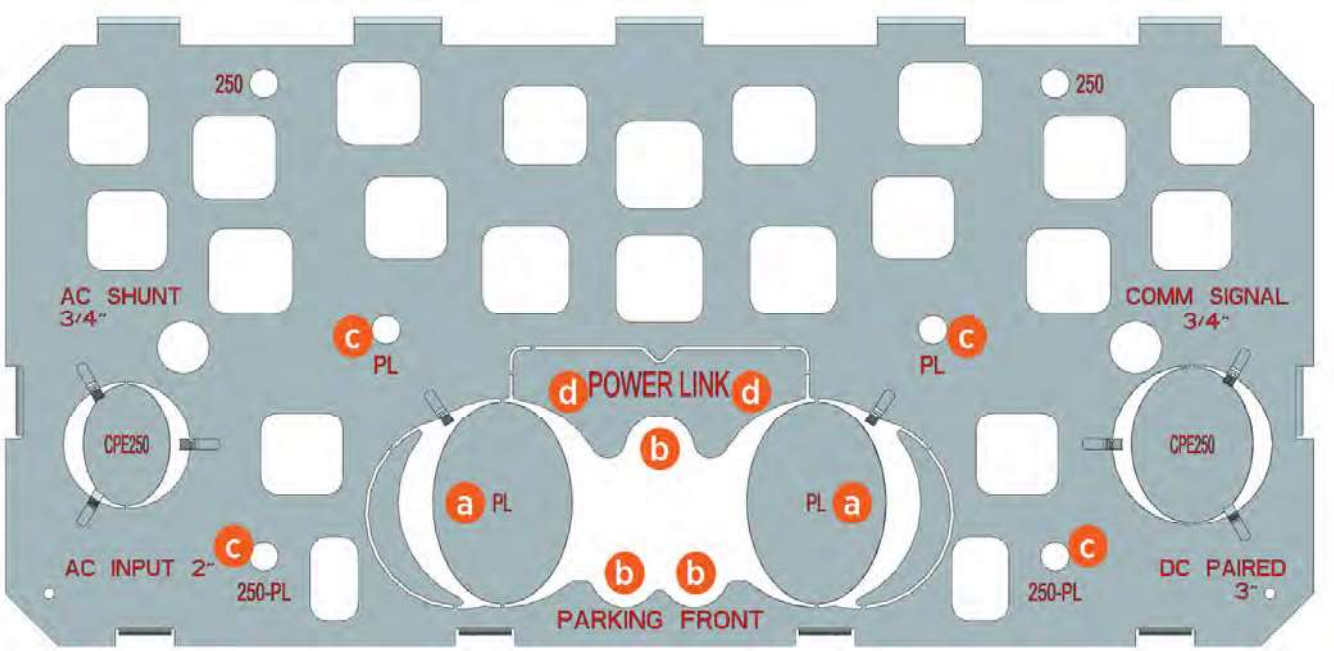
Note: Image not to scale.

Power Block	Clearance
a. rear	610 mm (24 in) recommended (for rear service access) 457 mm (18 in) required
b. front	1000 mm (39.3 in)
c. side	51 mm (2 in)

Power Link Readiness

Concrete Mounting Template (CMT)

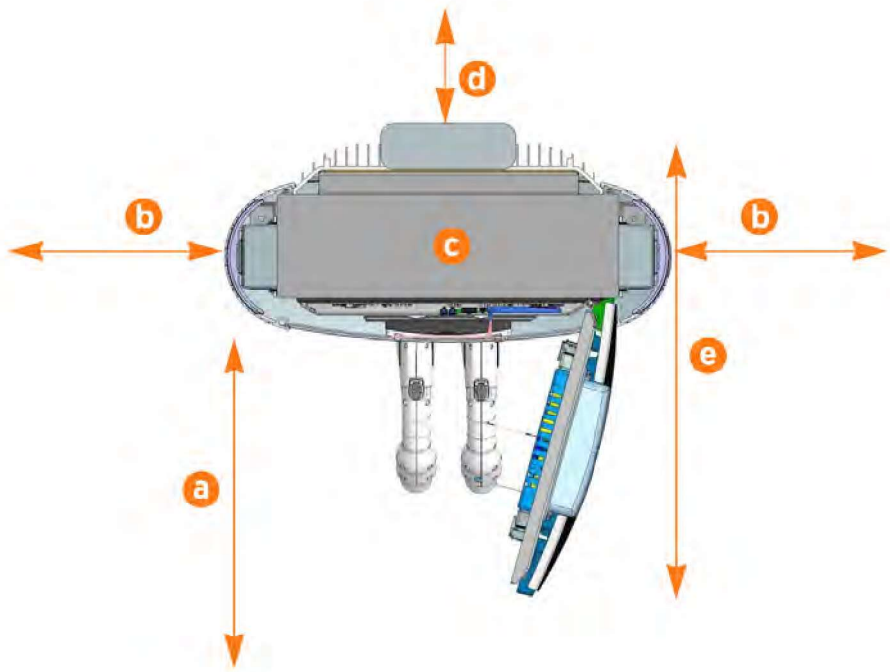
If the Power Link is pedestal-mounted and using stub-up wiring, ensure the Power Link Concrete Mounting Template (CMT) is already embedded in the concrete pad.



Conduit or Wiring	Description	Quantity
a. DC conductors	each up to 103 mm (4 in) trade size conduit	1 or 2
b. 48 V DC and Cat6 Shielded Twisted Pair (STP) Ethernet	21 mm (¾ inch) trade size conduit	1–3
c. M16 anchor bolts	76 mm (3 in) above concrete	4

Optional feature:		
d. (*anticipated late 2022*)		

Clearances



Note: Image not to scale.

Power Link	Clearance
a. front	610 mm (24 in) minimum open space
b. side	305 mm (12 in) from top corner to top corner **Note:** Two Power Link units can share side clearance.
c. top	305 mm (12 in)
d. rear	203 mm (8 in) **Note:** This includes clearance for optional features. No operation or service from the rear.
e. door swing + width of unit	730 mm (28.7 in)

General Estimates for Lifting

Configuration	Power Link (without cables or swingarm kit)	Charging Cable Weight	Cable Management Kit (swingarms attached)
Standard Pedestal	200 kg **Note:** 120 kg + 80 kg (pedestal)	~3.2–3.5 kg/m longer lengths vary	20 kg
Overhead Mounted (to a wall, gantry, post, or other surface)	120 kg		—

Electrical Readiness

If the site does not meet these basic requirements, contact ChargePoint before continuing.

- The appropriate circuit protection and metering is in place at the installation site.
- A grounding conductor that complies with local codes is properly grounded to earth at the service equipment or, when supplied by a separate system, at the supply transformer.
- A correctly rated, dedicated breaker is installed for each Power Block:

Nominal Voltage	Input Current Rating	Recommended Overload Protection	Minimum Circuit Breaker Size
400 V (EU)	315 A	370 A*	400 A
480 V (North America)	260 A	325 A**	350 A

*Adds 5% to current at low-line conditions

**The overload setting for North America is fixed at 125% of continuous rated current.

- Breakers have shunt trip capability (if specified) to each Power Block.
- All necessary electrical infrastructure has been completed per local codes and ChargePoint specifications for 3-phase power plus ground, with properly sized wire at the station. (Neutral is not required for system operation.)
- Wi-Fi and cellular signal strength meet requirements per the station's *Site Design Guide.*

For questions about site specifications, refer to the Express Plus *Datasheet* and Express Plus *Site Design Guide*.

IMPORTANT: The Power Link is tested to IEC 61000-4-5, Level 5 (6 kV @ 3000 A) standards. In geographic areas that experience frequent thunderstorms, supplemental surge protection must be installed at the service panel.

Check Express Plus Shipping Crates

Each Express Plus ships in multiple crates. Ensure you have all components at the installation site.

CAUTION: Always transport and store the charging components in their original packaging. Use appropriate lifting equipment (forklift or crane, lifting straps, and any corresponding attachments and accessories). Ensure the load rating of all lifting equipment is adequate for the weight of the crated 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.

IMPORTANT: Leave components in the shipping crate until needed. When removing, protect them from damage (such as scratches) by placing them flat on a blanket or tarp, face up. Do not stand up cover panels, as they may be knocked or blown over. Cover charging connectors to prevent damage or ingress.

Power Block	• Power Block unit(s)
	• pedestal
	• gland plates
	• enclosure (upper and lower cabinets together)
	  • lower heat exchanger (dry box hex)
	  Note: This ships in a box inside the lower cabinet of the enclosure.
	• fuses
	• doors and covers
	  • lower door preinstalled

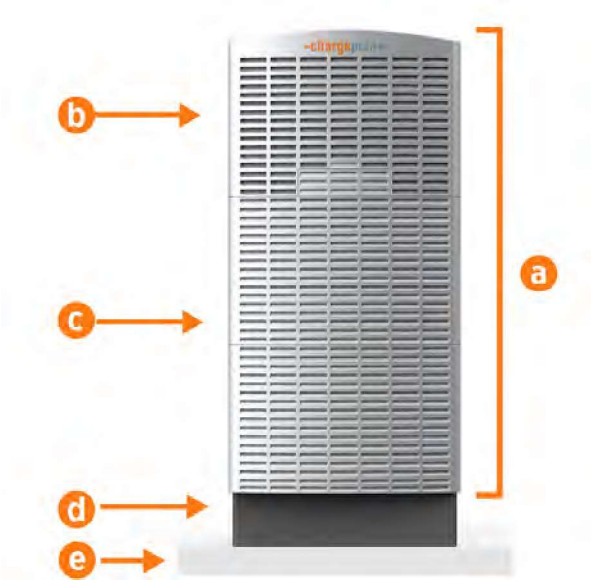
Power Link	• Power Link station(s) • charging cable(s) (1 or 2 per station) • cable management kit (CMK) or tool balancer
Power Module	• up to five per Power Block
Installation Kit	• Duct seal compound • Propylene glycol coolant **Note:** The coolant label references its *Material Safety Data Sheet*. • T25 Torx security driver • Coolant funnel

WARNING: Power Modules and the lower heat exchanger are heavy. Two people are needed to install these components.

CAUTION: Always rest a Power Module flat on the ground until it is being installed. Power Modules are not stable in any other position. Images of Power Modules standing with the handles on top only illustrate the proper installation position.

Install Power Block 2

Follow these instructions to anchor, install, and wire each Power Block.



a. enclosure
b. upper cabinet (wet box)
   - preassembled
c. lower cabinet (dry box)
   - preassembled
   - built-in slots for forklift tines
d. pedestal
   - built-in slots for forklift tines
e. pad

IMPORTANT: Height Constraints

If the site has height constraints for installation, contact ChargePoint to get the instructions and clearances that you will need for the modified process. You will likely need a crane with lifting shackles and a spreader bar (constraints may differ among sites).

Note to ChargePoint Personnel:

- If the site has height constraints for installation, the installer must first check clearance from the ceiling above the pad and from any objects to ensure nothing will obstruct the movement of equipment and components during this modified installation.
- Installer may remove the upper cabinet (refer to the *Service Guide*).
- With the upper cabinet removed, the four M10 threaded mounting points on the lower cabinet (at upper corners) can accept crane lifting shackles but *only* with a spreader bar.
- Installer may use a crane with lifting shackles and a spreader bar to install the pedestal (onto the pad), then lower cabinet, and upper cabinet.
- Installer must reinstall upper cabinet onto lower cabinet (refer to the *Service Guide*).

Disconnect Power

DANGER: RISK OF SHOCK

- *Before* any procedure, the technician must *disconnect the power.*
- Follow 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.
- Then *wait the required time* for *energy to dissipate* (see label on unit) before service. Do not remove signs or panels yet.
- *Keep power off* until all cover panels are correctly reinstalled and the work is complete.

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

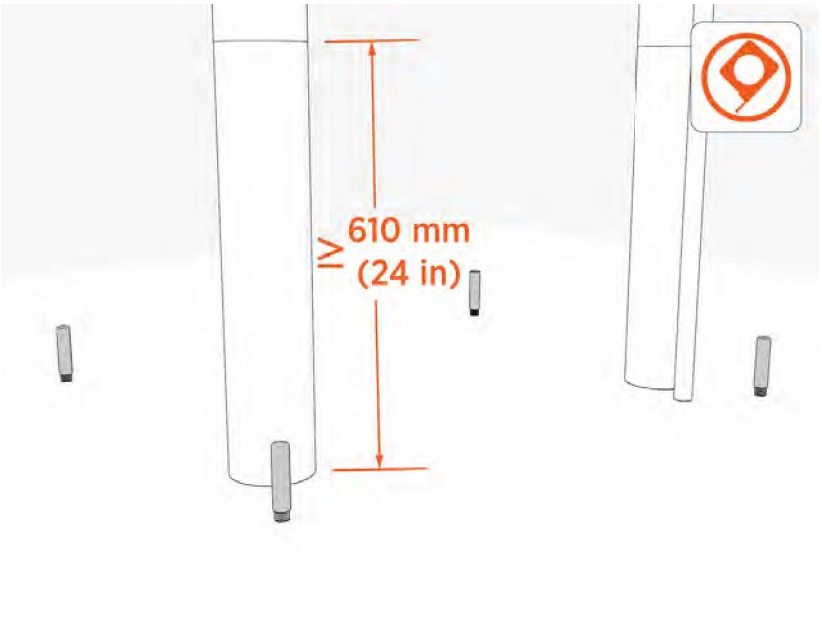
1. Disconnect power at the site electrical panel.

   Follow standard practice and local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding.

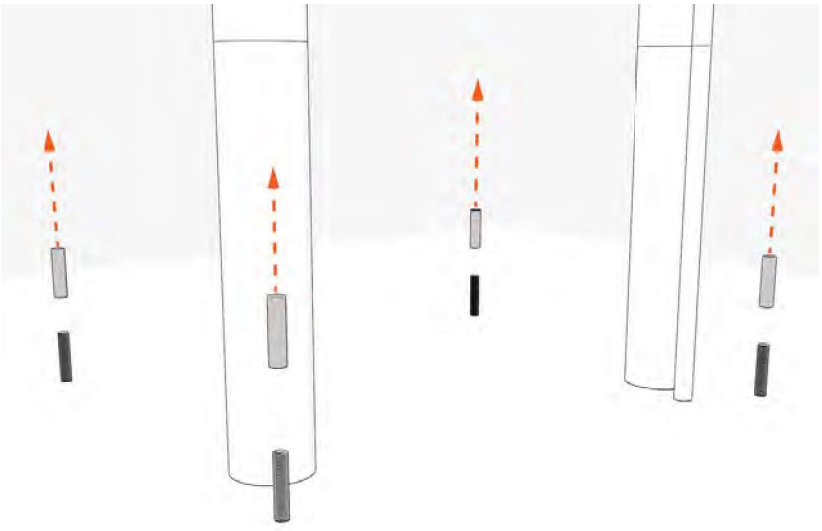
2. Use a multimeter to test that power is off.

Prepare Power Block Pad

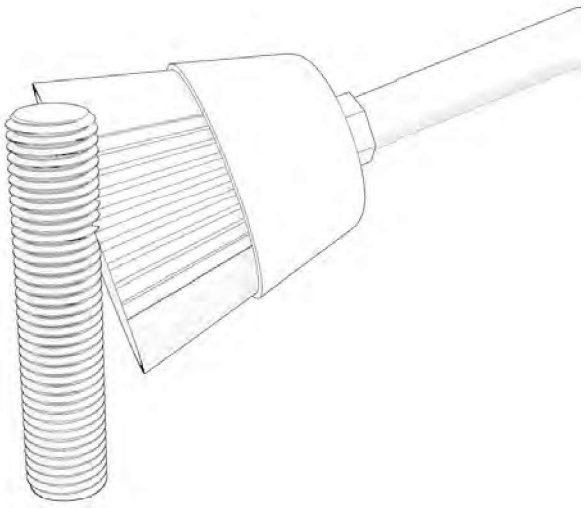
1. Ensure all DC and AC conduit stub-ups are at least 610 mm (24 in) high.
   If armored cable is used, strip the outer jacket to the same height.
   Tool: conduit cutter, cable cutter



2. Remove plastic caps from all anchor bolts on the concrete pad.



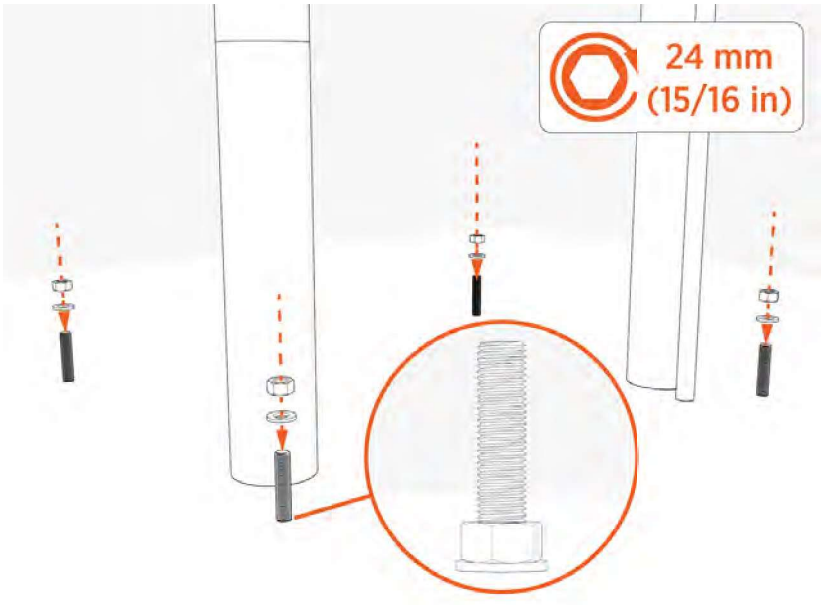
3. Use a wire brush to clean concrete off of bolt threads.



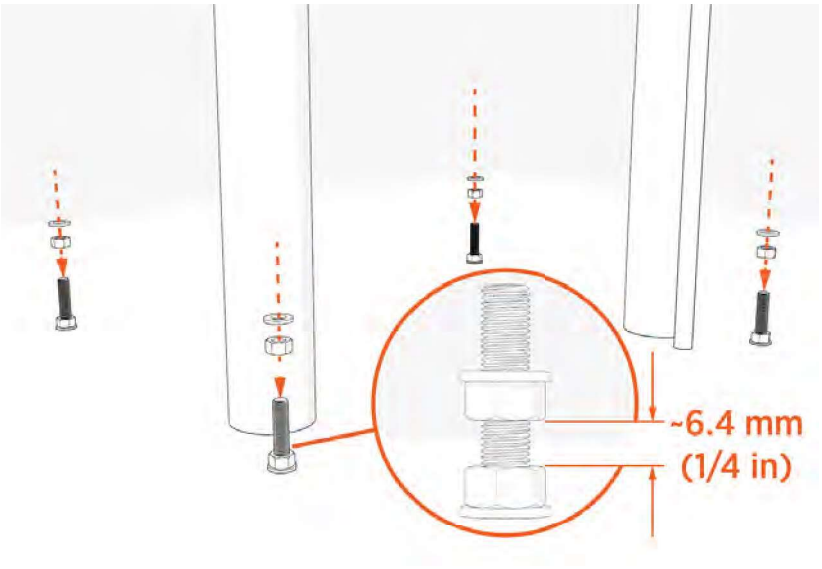
4. Install one washer and one M16 nut onto each of the four anchor bolts.

   Note: Washer and nut should be flush against concrete.

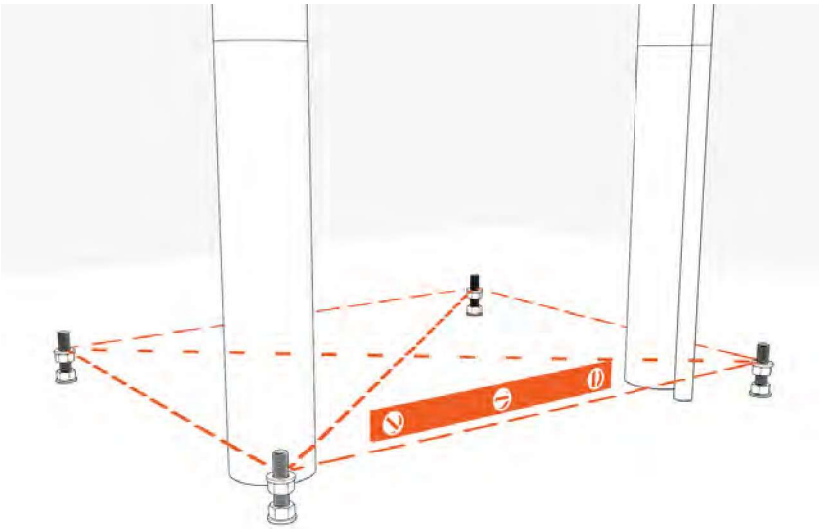
   Torque to **54 N·m (40 ft-lb).** **Tool:** 24 mm socket wrench



5. Install four washers and four M16 "leveling" nuts onto the bolts by hand.
   Maintain a space of ~6.4 mm (1/4 in) between each leveling nut and bottom nut.



6. Check that leveling nuts are level with each other.
   Tool: level

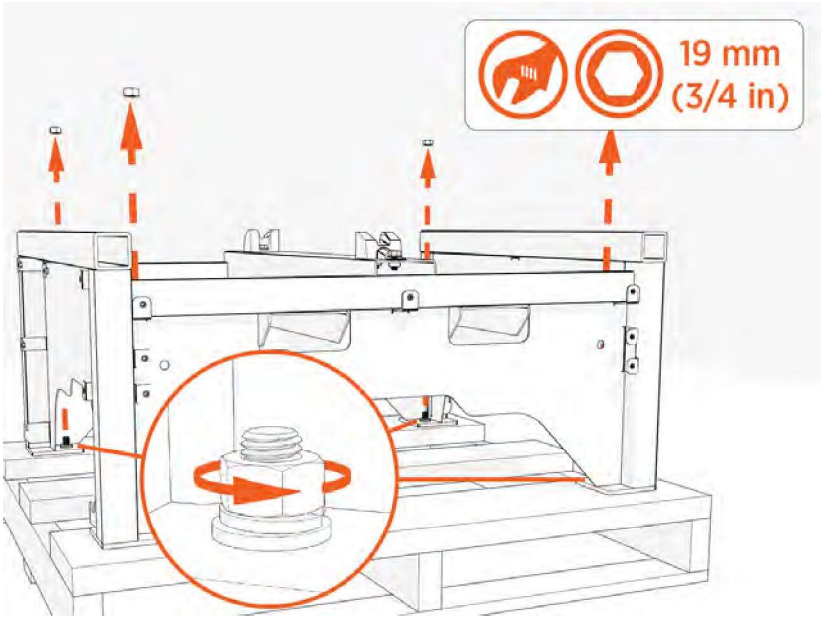


Install Power Block Pedestal

Uncrate the Pedestal

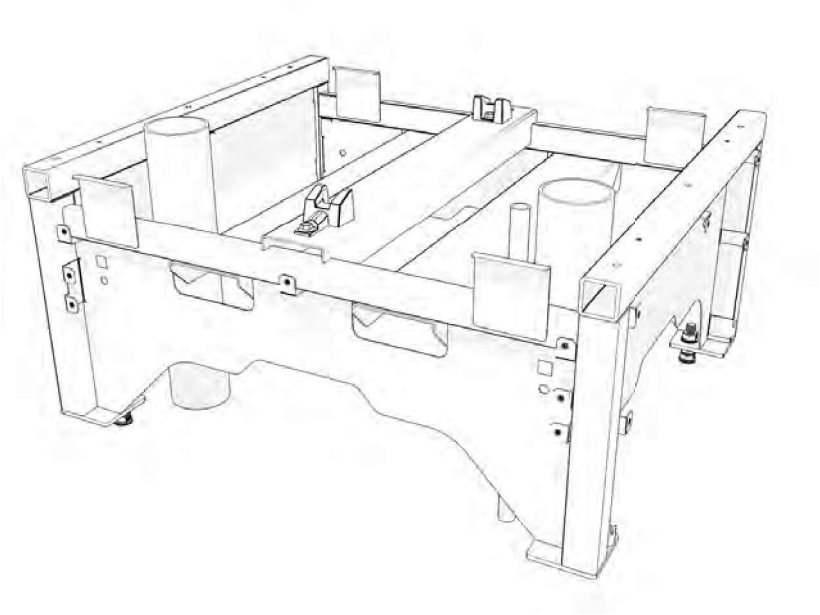
1. Unfasten and lift off the crate cover.
2. Uninstall four nuts (four corners and one center front) to remove the pedestal from the shipping pallet. Discard these nuts, washers, and bolts.

   Tools: 19 mm (3/4 in) deep socket wrench and adjustable wrench



3. Uninstall three nuts and bolts from each gland plate. Remove the gland plates temporarily.

   Tool: 15 mm (9/16 in) deep socket wrench



4. Check the rubber gaskets on the underside of the pedestal.

   If you find any gaps, contact ChargePoint (chargepoint.com/support).

Mount and Secure the Pedestal

5. Before you move the pedestal onto the pad, prepare one of these:

   a. Forklift:

   Adjust the forklift tines to 102–127 mm (4–5 in) width.

   Insert the forklift tines through the rectangular openings at front and back.

   CAUTION: If any wider, the forklift tines may hit a conduit stub-up.
   Do not hit a wall or other obstacle that may be behind the Power Block pad.

   b. Manual lift:

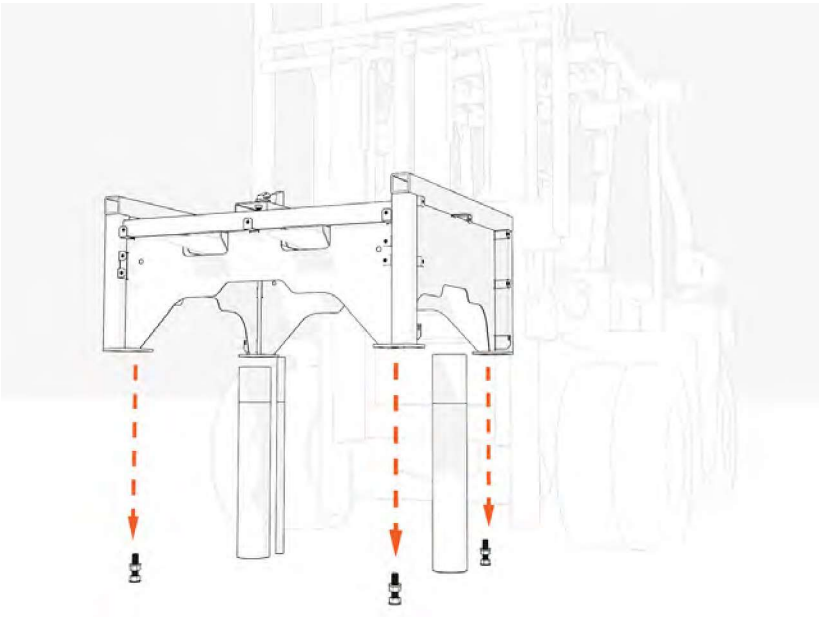
   Sync up with your lifting partner.

   WARNING: Two-Person Lift
   - You need a partner to move this part.
   - Ensure you have a good grip.
   - Use proper form when you lift: Bend your legs, *not* your back.

6. Suspend the pedestal above the pad.

   As you move the pedestal down, align the holes (in pedestal feet) onto the anchor bolts (in concrete pad).
   Note: Move wiring out of the way.

   Tool: forklift *or* two people



7. When the pedestal is fully seated, check that all four sides are level (vertically and horizontally).

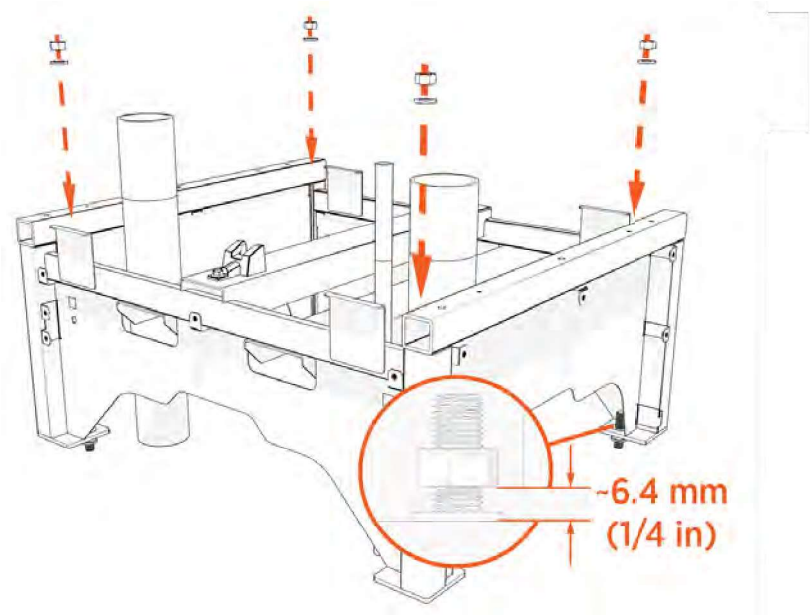
   If not, adjust three of the leveling nuts to make the pedestal level.

   Tool: 24 mm socket wrench and a level

8. Partially install a washer and M16 "top" nut onto each of the four bolts by hand.

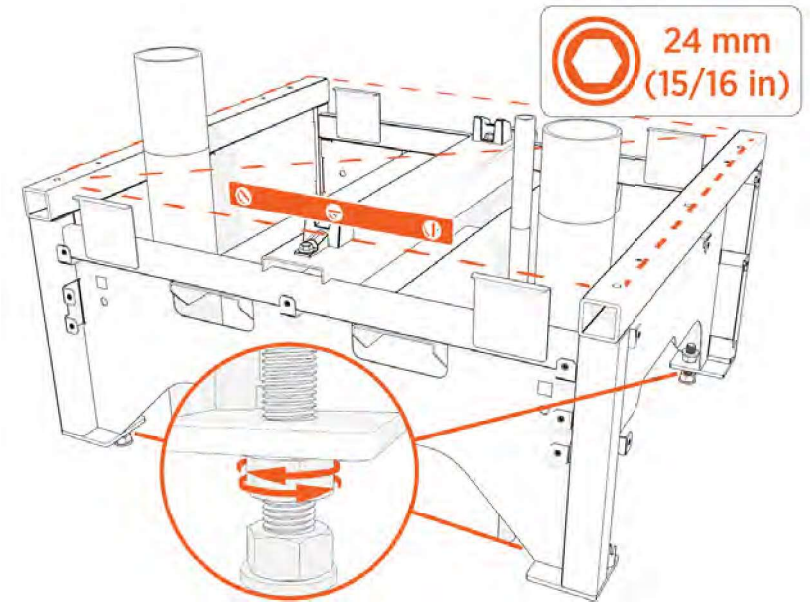
   Note: Do not tighten yet. Leave a ~6.4 mm (1/4 in) gap between the top nut and the pedestal foot.

   Tool: 24 mm socket wrench

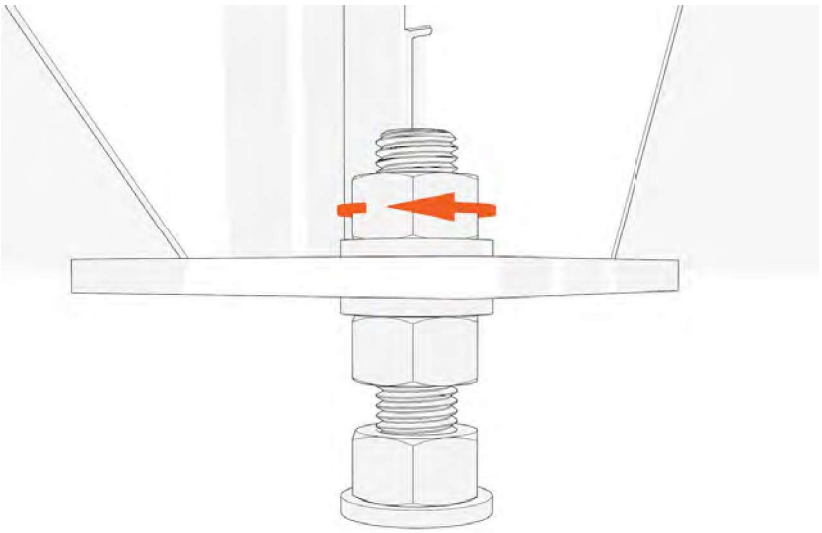


9. Recheck and adjust leveling nuts again.

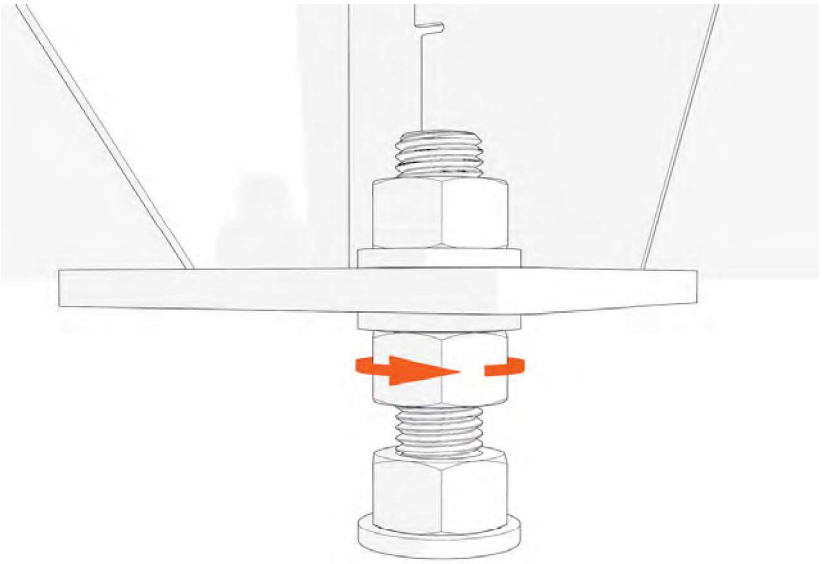
   Tool: 24 mm socket wrench, a level



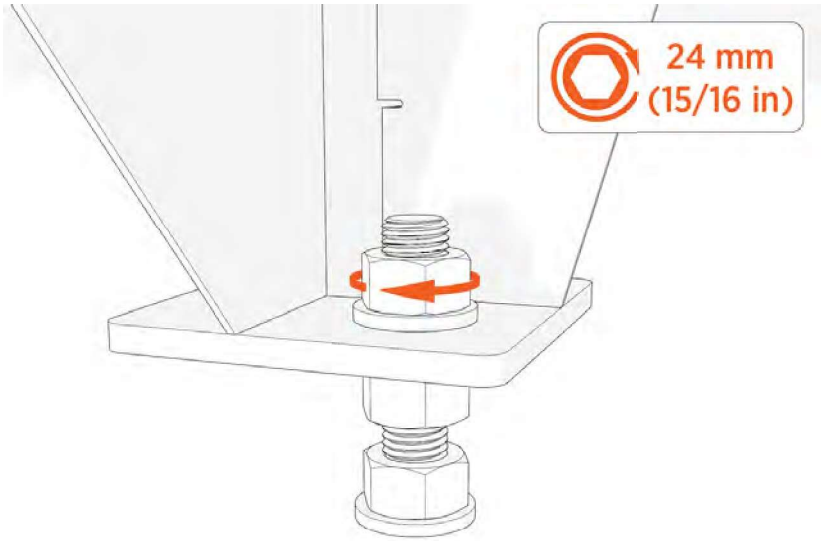
10. When the pedestal is level, tighten four top nuts by hand.



11. Rotate the fourth (last) leveling nut to be flush against the pedestal.

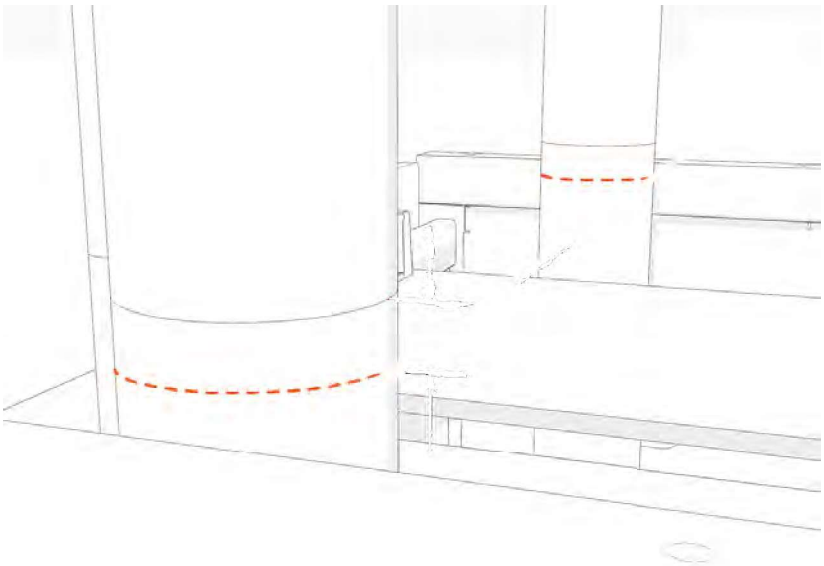


12. Torque all top nuts to **94.9 N·m (70 ft-lb).** **Note:** If epoxied, do not exceed the epoxy torque rating.
    Tool: 24 mm socket wrench

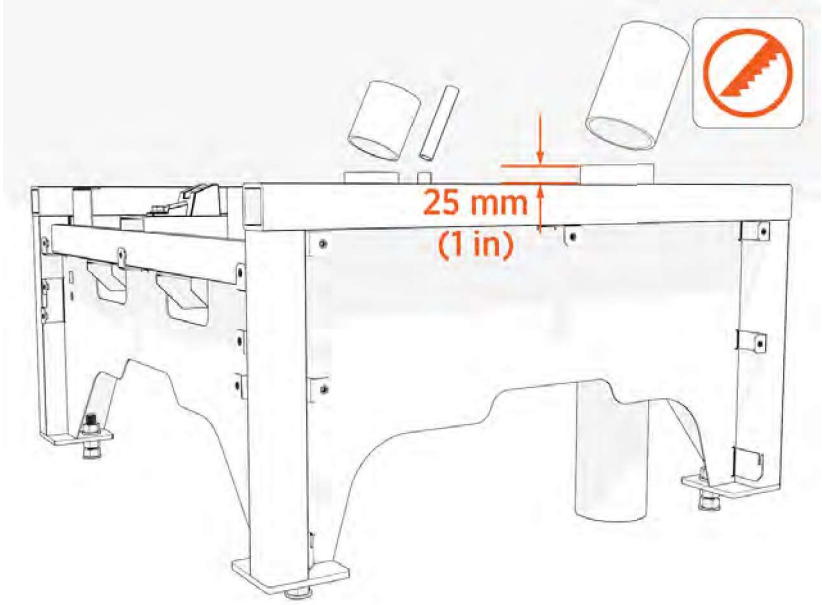


Prepare Gland Plates

13. Mark the conduit stub-ups at the height of the pedestal top surface. **Tool:** permanent marker



14. Measure and cut each stub-up to a height of 25 mm (1 in) *above* the gland plate. **Tool:** conduit cutter
File the edges smooth. **Tool:** file

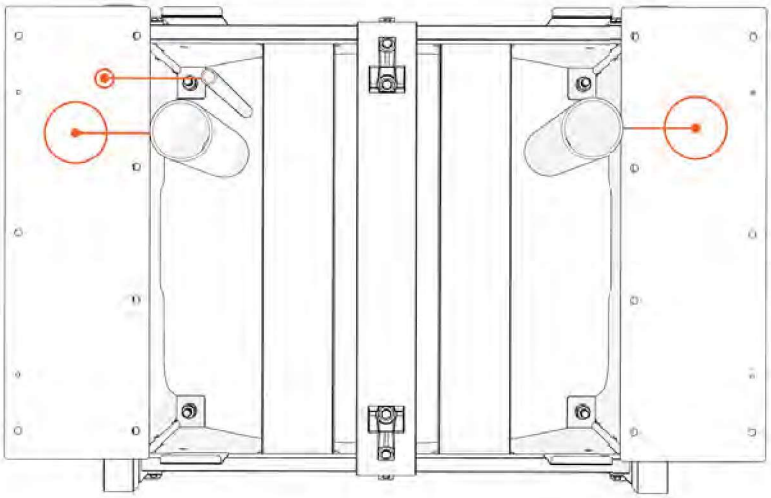


CAUTION: If you fail to file the edges, wires can be damaged by the stub-up.

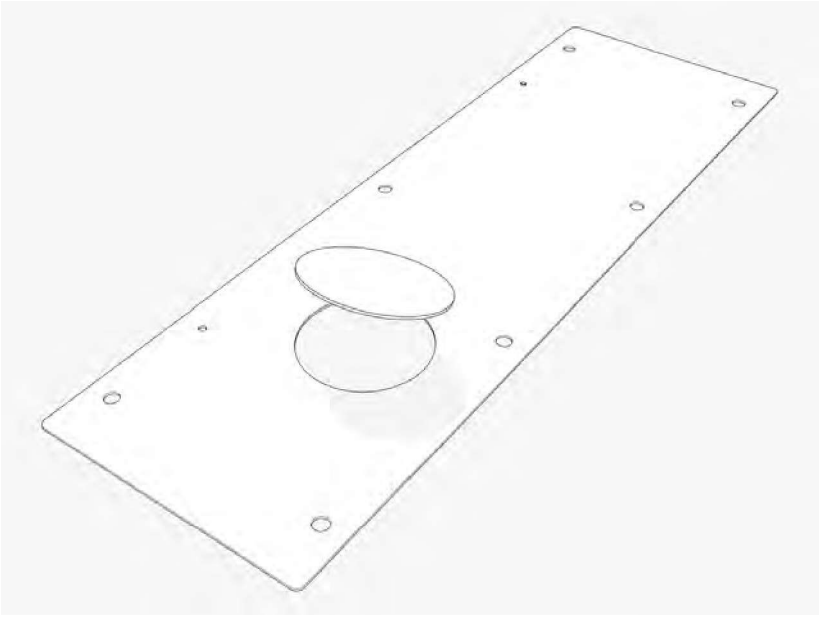
CAUTION: Do not use bell ends on the conduit. They can interfere with tolerances inside the enclosure.

15. Use the two outer pins to align each gland plate on the pedestal.

16. Mark the gland plate with the exact locations of each stub-up. **Tool:** permanent marker
17. Mark a pilot point on the gland plates. **Tool:** permanent marker

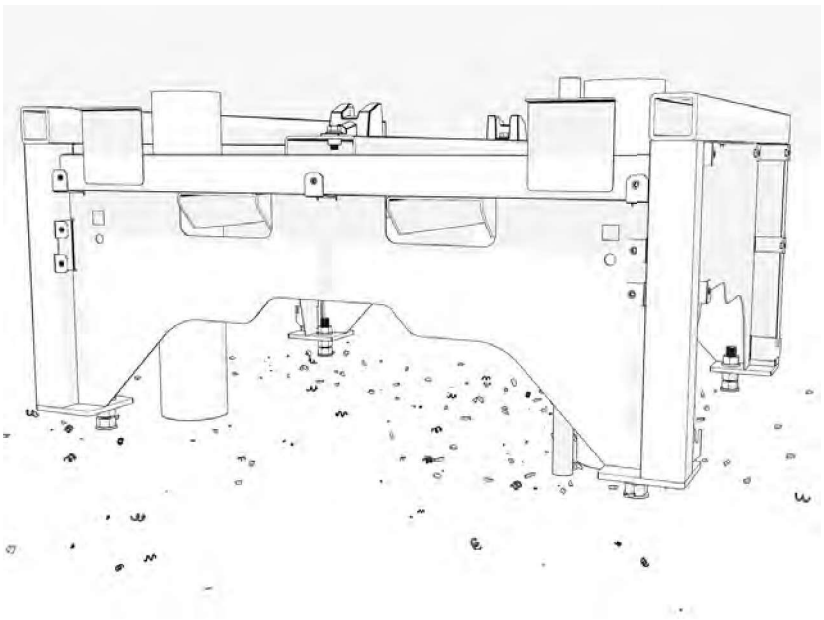


18. Use the hydraulic hole punch to create holes for all conduits.



IMPORTANT: You must match the size of each conduit.

19. Vacuum all metal shavings and any other debris.



Pull Wiring Through Conduits

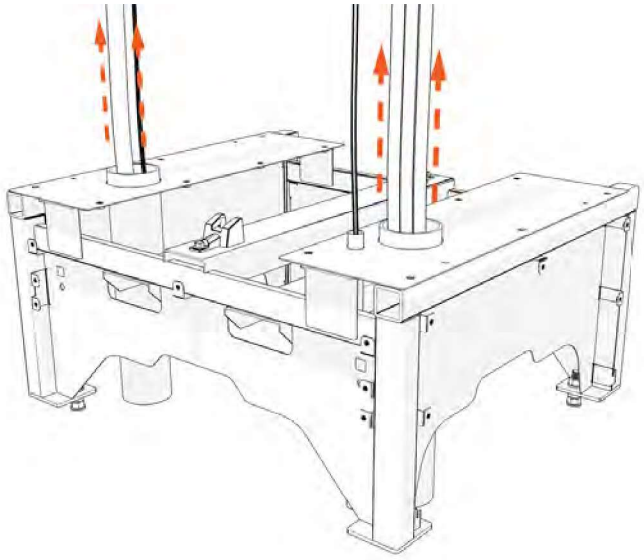
20. Pull all wires through the conduits.

    a. Match the locations shown on the Power Block concrete mounting template (CMT).

DC output	1 or 2 conduits
DC auxiliary input (optional package)	1 conduit
AC input	1 conduit
48 V DC and Cat6 Shielded Twisted Pair (STP) Ethernet conduits: i. Shunt trip, if present ii. one Ethernet, one 48 V DC out iii. two Ethernet, either one or two 48 V DC out iv. three Ethernet, either one or two 48 V DC out	1, 2, 3, or 4 conduits **Note:** Check site drawings.. Check site drawings. Check site drawings. Check site drawings. Check site drawings.

    b. Retain these lengths of service loops:

1219 mm (4 ft)	of conductor and ground wire	at Power Block
1524 mm (5 ft)	of conductor and ground wire	at Power Link
1829 mm (6 ft)	of Ethernet and 48 V wire	at each end



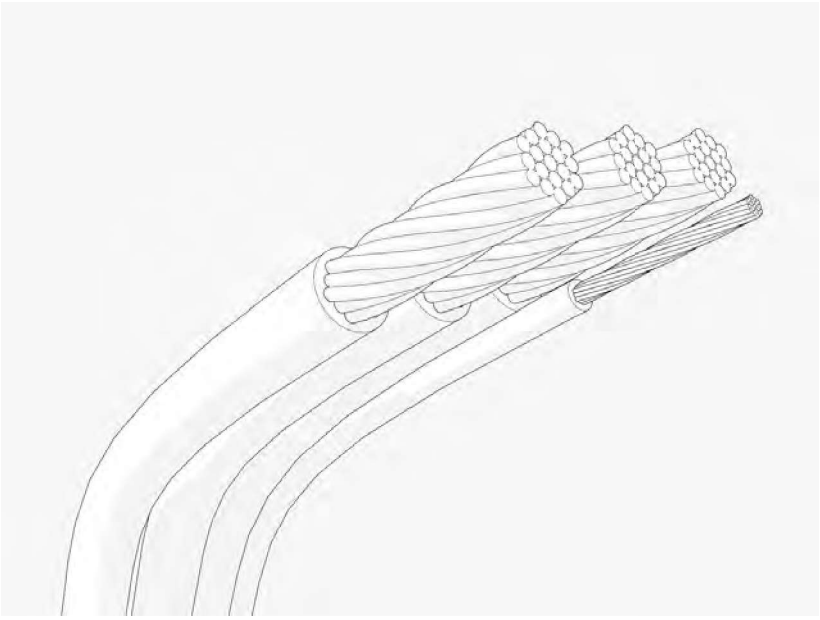
IMPORTANT: Do not pull a Neutral wire.

Note: For maximum wire and ground sizes and their minimum conduit sizes, see the Express Plus *Site Design Guide.*

Note: To route surface conduit wiring, refer to the *Surface Mount Guide.*

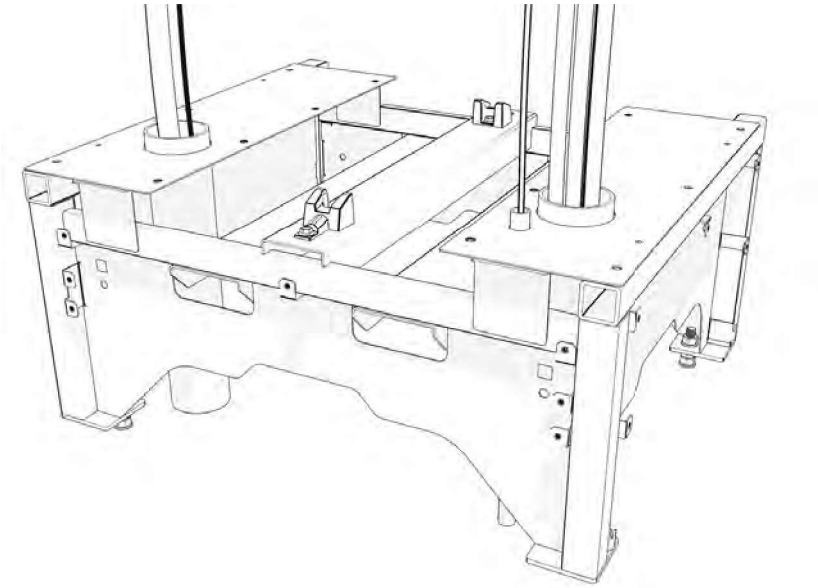
21. Perform a continuity check of wires. Repair any wires damaged during the previous steps.

IMPORTANT: If you fail to repair damaged wires, you may impact site commissioning.



22. Reinstall two gland plates.

Tool: 15 mm (9/16 in) socket wrench



Install Power Block Enclosure

1. Transport the crate to the installation site. Use lifting straps to stabilize.

WARNING: THE CRATE IS HEAVY AND CAN CAUSE INJURY OR DEATH IF DROPPED. DO NOT STAND OR WALK BENEATH THE CRATE WHILE IT IS BEING MOVED. TAKE PRECAUTIONS AGAINST THE CRATE TIPPING OR SLIDING.

CAUTION: Maintain the upright orientation of the crate.

Prepare the Enclosure

2. Unfasten and lift off the crate cover.
3. Open the crate:
   a. Bottom:

      Remove the six lag bolts from the bottom of the crate.

      Tool: 15 mm (9/16 in) socket wrench

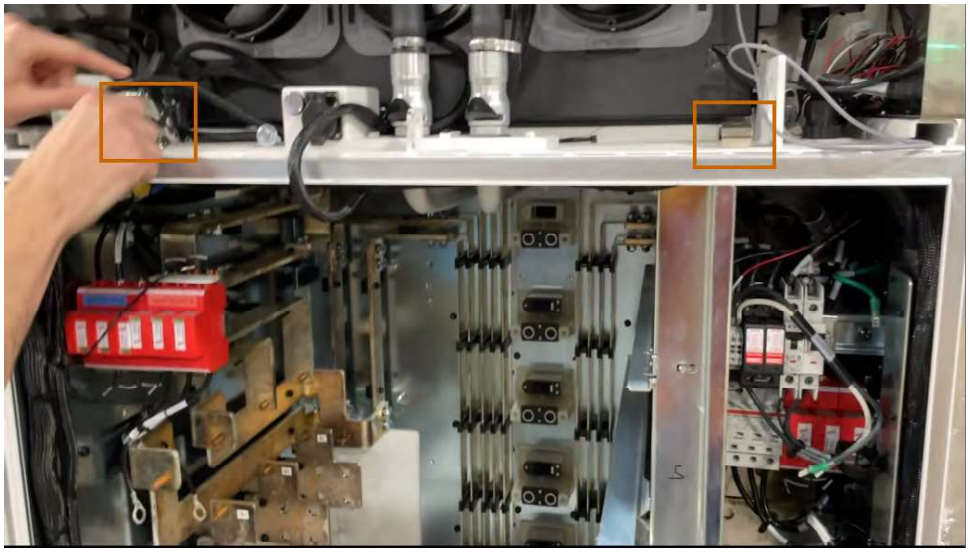
   b. Top, Sides, Back:

      Sync up with your lifting partner. Slide off the top, sides, and back of the crate.

WARNING: Two-Person Lift

- You need a partner to move this part.
- Ensure you have a good grip.
- Use proper form when you lift: Bend your legs, *not* your back.

4. Uninstall the lower door:
    a. Unfasten the two latches.



    b. Hold and tilt out the top of the door. Lift up and off .

5. Remove the package that contains the lower heat exchanger (dry box hex).

   Note: You will install this later.

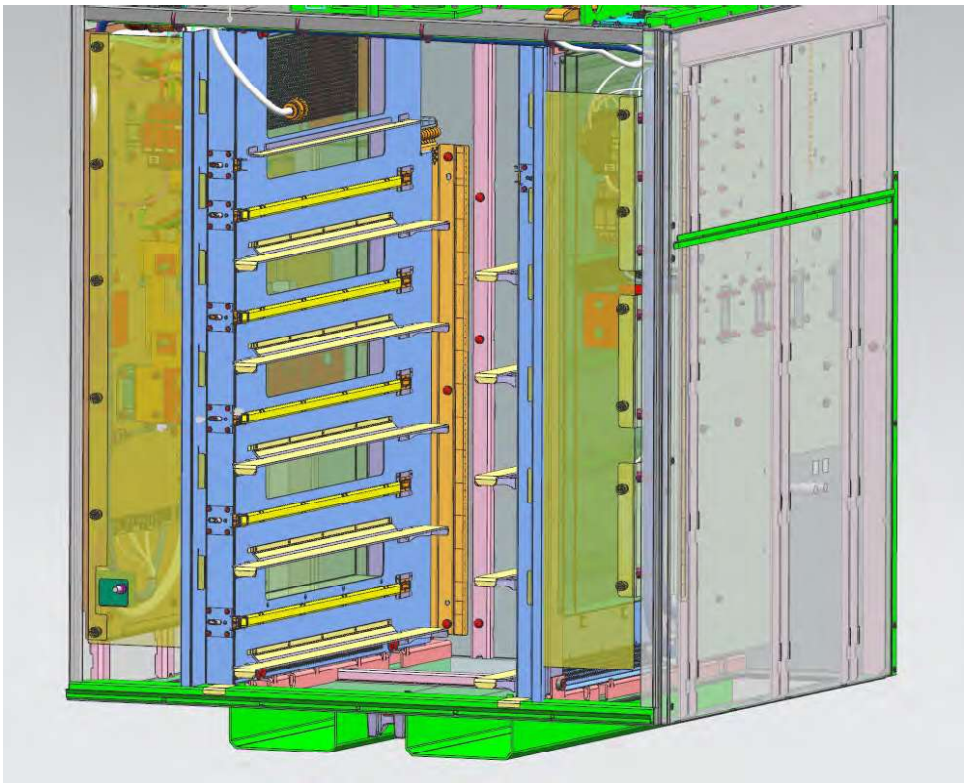
6. Remove two transparent shields (touchsafe panels):

   a. Loosen six captive screws by hand for each transparent shield.

      Note: If too tight to loosen by hand, use a #5 Phillips screwdriver.

      Slightly rotate out the edge with the screws.

   b. On the other edge of the transparent shield, slide the tabs out of slots in the rack (to remove each transparent panel).



7. Remove two racks:
    a. Uninstall the four M10 screws attaching the rack to the lower cabinet interior (two upper, two lower, at front and rear).

    Tool: 15 mm (9/16 in) socket wrench

    b. Hold the outer edge of the rack. Slide out the rack.

8. Uninstall four nuts from the base of the crate. Discard these nuts, washers, and bolts.

    Tool:

    - 14 mm (9/16 in) deep socket wrench
    - adjustable wrench

CAUTION: Do not drag the bottom of the Power Block enclosure at any time. Gaskets underneath can be damaged.

Position and Secure the Enclosure

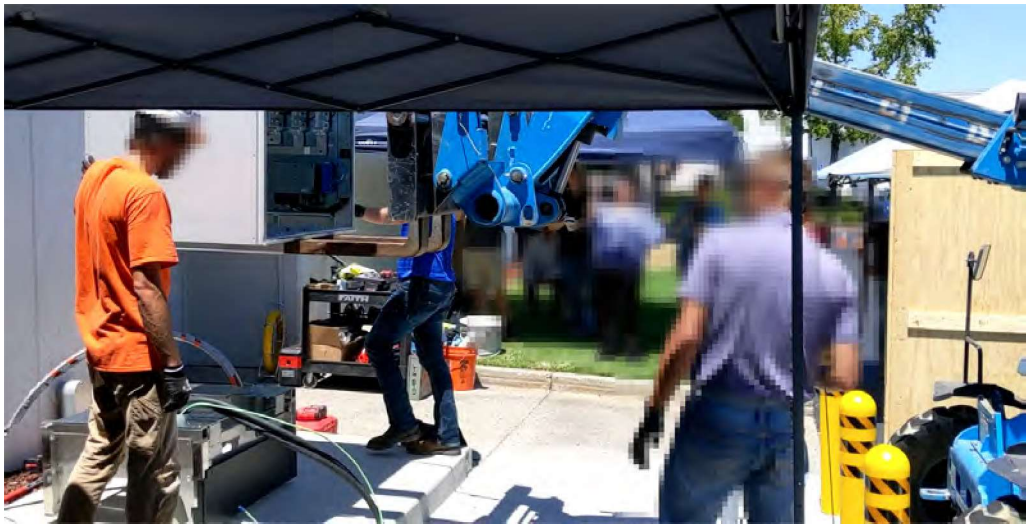
1. Insert forklift tines into slots at bottom of the enclosure.

   Position straps around upper half.

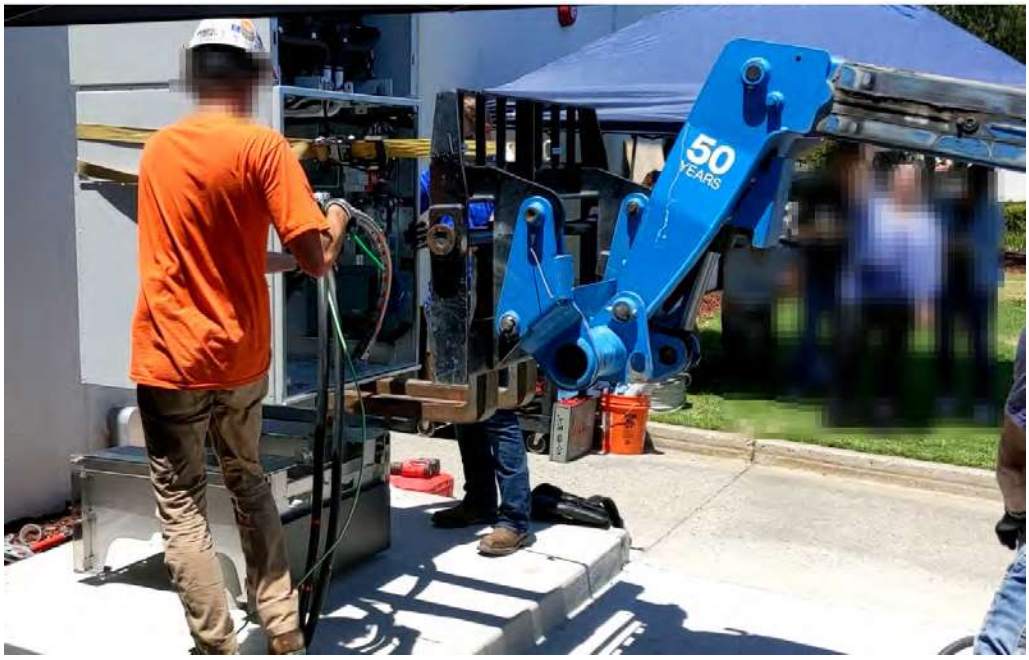
   Tool:

   - forklift
   - lifting straps

2. Move and hold enclosure above pedestal. Keep it elevated.
   Route wiring up through bottom of enclosure.

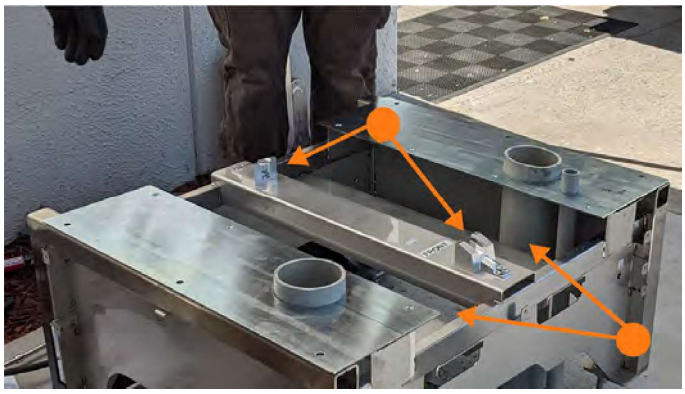


3. Slowly move the enclosure down toward the pedestal. Continue to pull wiring up through bottom.



4. Position the enclosure a few inches/cm above the pedestal. Continue to move wiring out of the way.

   With approximately 1/4 inch (0.6 cm) of space between enclosure and pedestal, align the screw holes.

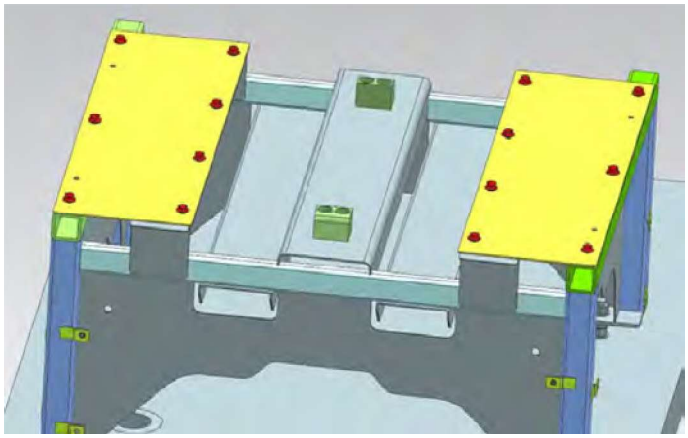


   a. center pedestal beam
      - aligns right and left
      - fits between two slots at base of enclosure
   b. angled alignment blocks
      - align forward and backward

5. Install washers and fourteen M10 screws (seven on each plate).

   Torque to **19 N·m (168 in-lb).**

   Tool: 15 mm (9/16 in) deep socket wrench



Connect Power Block Wiring

DANGER: RISK OF SHOCK

- *Before* any procedure, the technician must *disconnect the power.*
- Follow 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.
- Then *wait the required time* for *energy to dissipate* (see label on unit) before service. Do not remove signs or panels yet.
- *Keep power off* until all cover panels are correctly reinstalled and the work is complete.

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

CAUTION: Ensure a grounding conductor that complies with local code is properly grounded to earth at service equipment or, when supplied by a separate system, at the supply transformer.

1. If you did not already, do this:
   a. Disconnect power at the site electrical panel.

      Follow standard practice and local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding.

   b. Use a multimeter to test that power is off.

Measure and Cut

2. Loosely install lugs only (without the conductors) onto bus bars. Hand-tighten.
   a. DC output
   b. AC input
   c. DC input, if applicable

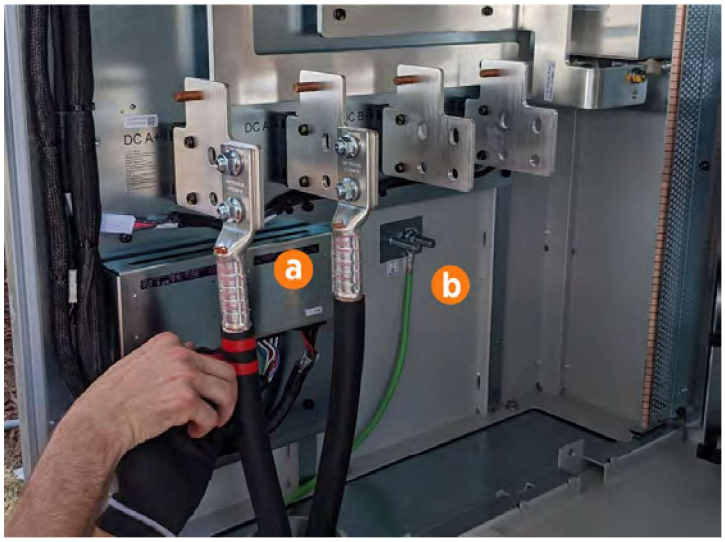
   Note: Use included bolts, washers, and nuts.
3. Measure the length from each conductor to its corresponding lug.

   Mark the conductor at the point where you will need to cut it.

   Tool: permanent marker
4. Strip and cut the conductors to the desired length.

   Tool: cable cutter

Install Conductors and Lugs, Ground Wires, and Fuse Kits



a. DC output lugs
b. DC ground wire

IMPORTANT: For any DC or AC lug with a single hole, the lug must be installed within +/- 10° from vertical to avoid interference.

Note: For each AC and DC bus bar, only one washer is required per bus bar hole, even if lugs are installed onto the front and back of the same bus bar.

DC Output Lugs

5. Uninstall the lugs (if you installed them previously to measure length)
   Apply conductive dielectric grease onto the back of each lug.
6. Crimp a DC output lug onto each conductor.
   Note: Use the lug manufacturer's crimp tool and die.
7. Install lugs onto each bus bar with M12 bolts. Torque to **21 N·m (185.9 in-lb).**
   Tool: 18 mm socket wrench for nut
   16 mm socket wrench for bolt
8. Mark all torqued power connections.
   Tool: torque paint pen

DC Ground Wire

9. Crimp a 13 mm (½ in) single-hole lug onto the DC ground wire.
   Tool: 18 mm socket wrench
10. Connect the GND (protective earth) service wiring to the stud on the left side of the enclosure/cabinet.

DC Fuse Kits

11. Between the landing bus bar and the DC bus bar, install *all* DC fuses (regardless of number of lugs used). Torque to **19 N·m (168 in-lb).**
    Tool: 15 mm (9/16 in) socket wrench

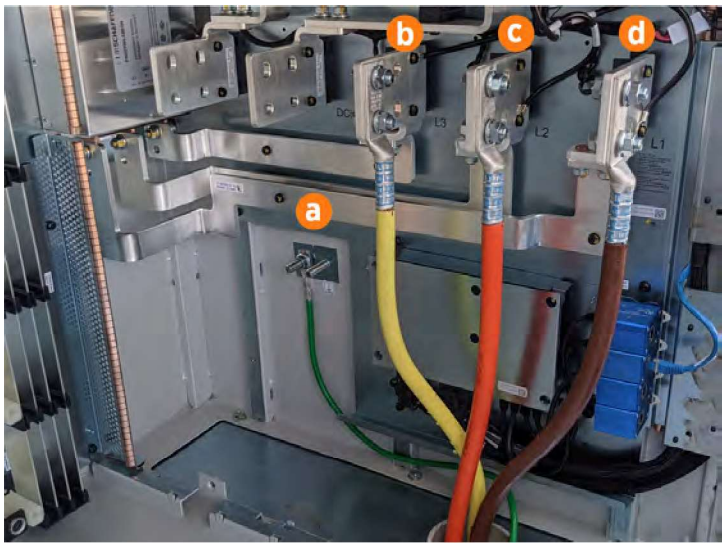
> **IMPORTANT:** Route the wiring away from the fuse (which can reach very high temperatures).

Adhere Ratings Label

12. Adhere the associated ratings label.

> **IMPORTANT:** Position next to serial number label, next to Ethernet port.

AC Input Lugs



a. ground wire
b. L3
c. L2
d. L1

13. Uninstall the lugs (if you installed them previously to measure length)
    Apply conductive dielectric grease onto the back of each lug.
14. Strip and crimp an AC input lug onto each conductor.
    Note: Use the lug manufacturer's crimp tool and die.
15. Install the L1, L2, and L3 lugs onto each bus bar with M12 bolts. Torque to **21 N·m (185.9 in-lb).**
    Tool: 18 mm (½ in) socket wrench for nut
    16 mm socket wrench for bolt
16. Mark all torqued power connections.
    Tool: torque paint pen

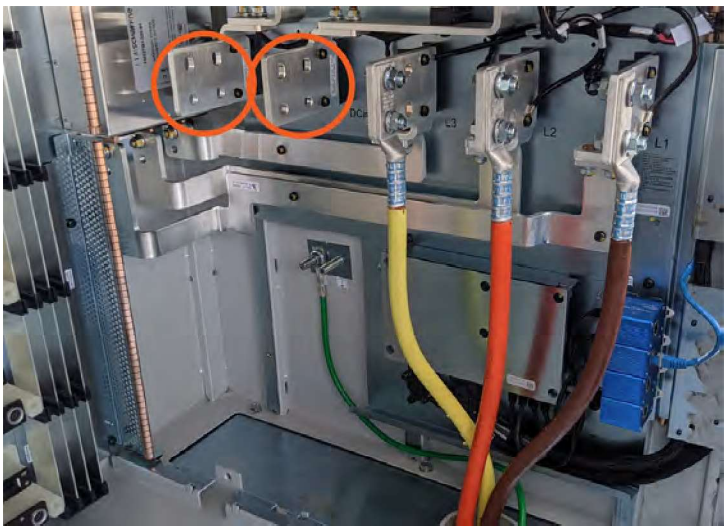
IMPORTANT: Ensure the L1, L2, and L3 cables are installed in the correct order for counter-clockwise phase rotation. Incorrect installation creates a phase rotation error later in the process.

IMPORTANT: If the AC input wiring uses only one 750 kcmil conductor, it must be installed on the bus bar in the position farthest from the wall (toward the center) to avoid interference.

AC Ground Wire

17. Crimp a 13 mm (½ in) single-hole lug onto the AC ground wire.
    Tool: 18 mm socket wrench for nut
18. Connect the GND (protective earth) service wiring to the stud on the right side.

DC Input Lugs



19. Uninstall the lug (if you installed them previously to measure length).
    Apply conductive dielectric grease onto the back of each lug.
20. Strip and crimp a DC input lug onto each conductor.
    Note: Use the lug manufacturer's crimp tool and die.
21. Install lugs onto each bus bar with M12 bolts.
    Torque to **21 N·m (185.9 in-lb).**
    Tool: 18 mm socket wrench for nut
    16 mm socket wrench for bolt
22. Mark all torqued power connections.
    Tool: torque paint pen

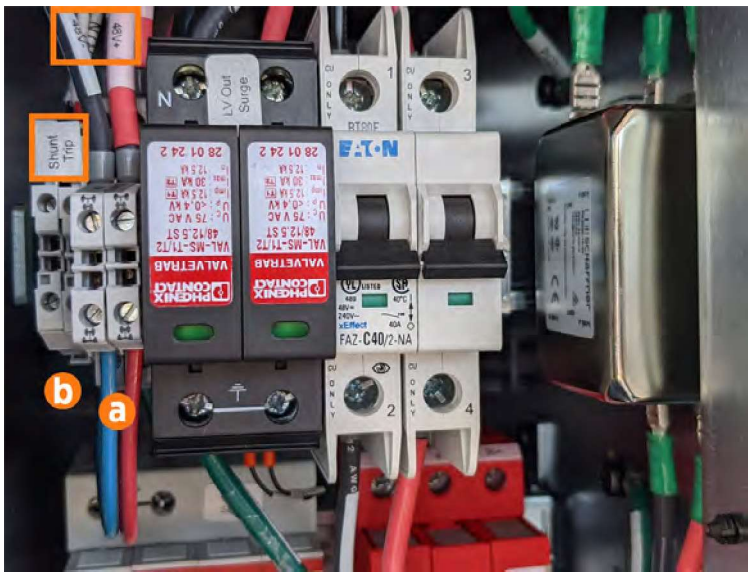
48 V DC and (if Applicable) Shunt Trip

23. Check the 48 V DC wiring requirements in the site plans:

Site Wiring	48 V DC Wire Size	Conduit Size	Maximum Installed Within Conduit	If 2nd Ethernet Is Required	
				Conduit	Maximum Within
Power Block directly to Power Link	16 mm^2 (6 AWG)	21 mm (¾ in) trade size	• 2 wires and • 1 Ethernet cable	additional 21 mm (¾ in) trade size	• 2 wires and • 2 Ethernet cables
Power Block directly to Power Hub	16 mm^2 (6 AWG)	21 mm (¾ in) trade size	• 2 wires and • 1 Ethernet cable	additional 21 mm (¾ in) trade size	• 2 wires and • 2 Ethernet cables
Power Hub directly to a single Power Link	6 mm^2 (10 AWG)	21 mm (¾ in) trade size	• 2 wires and • 1 or 2 Ethernet cables	—	

Note: Use only copper conductor wire rated for 90°C.

24. Strip the 48 V DC and any shunt trip wires 20 mm (13/16 in) each.



a. 48 V DC
b. shunt trip (if any)

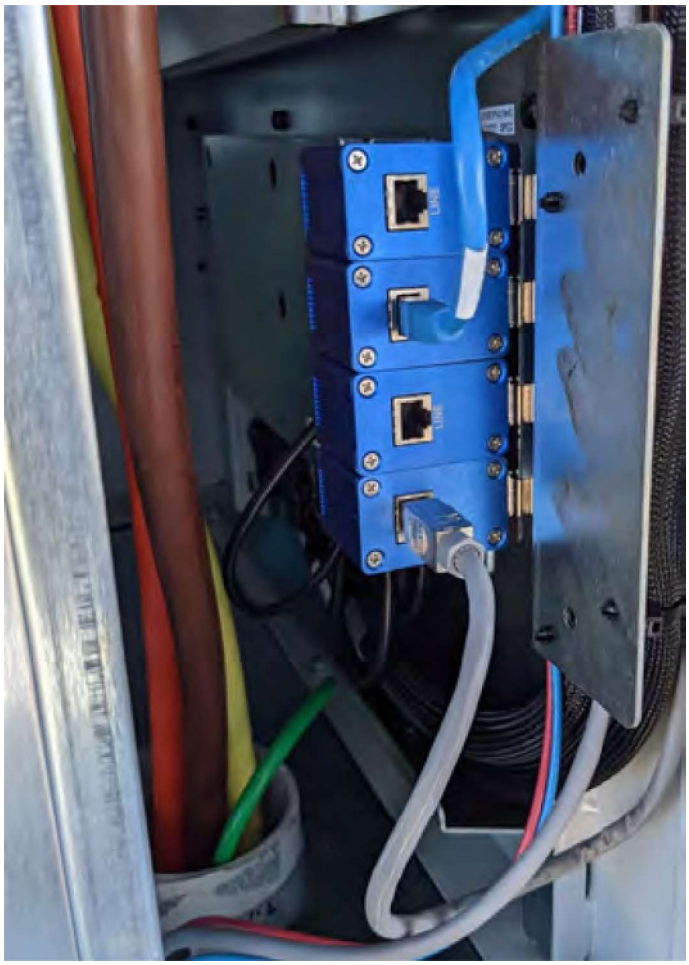
Note: Notice the labels.

25. Loosen each terminal tab and seat the wire. Tighten the screw by hand. Push-pull to test.

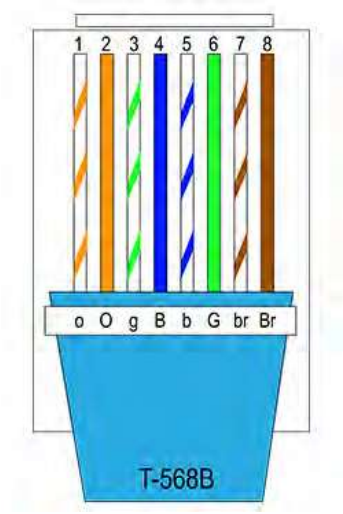
Tool: #3 Phillips screwdriver

Cat6 STP Ethernet Cable

26. Trim each Cat6 STP Ethernet cable to provide a 914 mm (36 in) service loop.



27. Terminate both ends and field crimp each Ethernet wire onto a shielded connector.
    Use a straight-through T568-B pattern.



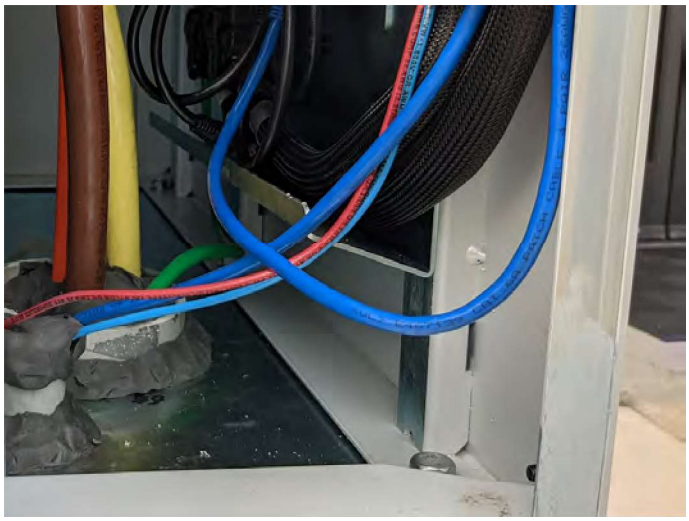
28. Connect the shield wire here at Power Block termination.
29. Test each Ethernet wire functionality.
30. Connect each Ethernet connector to an available port (at lower right). Push-pull to test.
    Note: Ports are interchangeable.

Position and Seal

31. Vacuum all wire ends and metal shavings from the enclosure.
32. Route the Ethernet, 48 V DC, and shunt trip wires down the front, right side. Secure with clips.
33. Position excess Ethernet wire loops behind the circuit board mounts.
    Note: This is to prevent covers from pinching these wires.
34. Use duct seal compound (included) to seal all wiring openings and inside conduits.

IMPORTANT: The conduit opening *must* be sealed to protect the wiring from any debris, pests, and other matter.

35. Use the duct seal compound to seal the conduits around and to the gland plates.



Install Power Block Internal Parts and Fill Coolant

A Power Block can use up to five Power Modules, which ship in separate pallets.

WARNING: Two-Person Lift

- You need a partner to move this part.
- Ensure you have a good grip.
- Use proper form when you lift: Bend your legs, *not* your back.

CAUTION:

- Install the rack with latches on the left.
- Orient the supports toward each other (to form shelves for Power Modules).

Install Left and Right Racks

1. Align each rack vertically along the guide rails. Slide into the lower cabinet.
2. Install four M10 screws into the cabinet interior (front and rear, upper and lower) for each rack.

   Torque to **19 N·m (14 ft-lb).**

   Tool: 15 mm (9/16 in) socket wrench

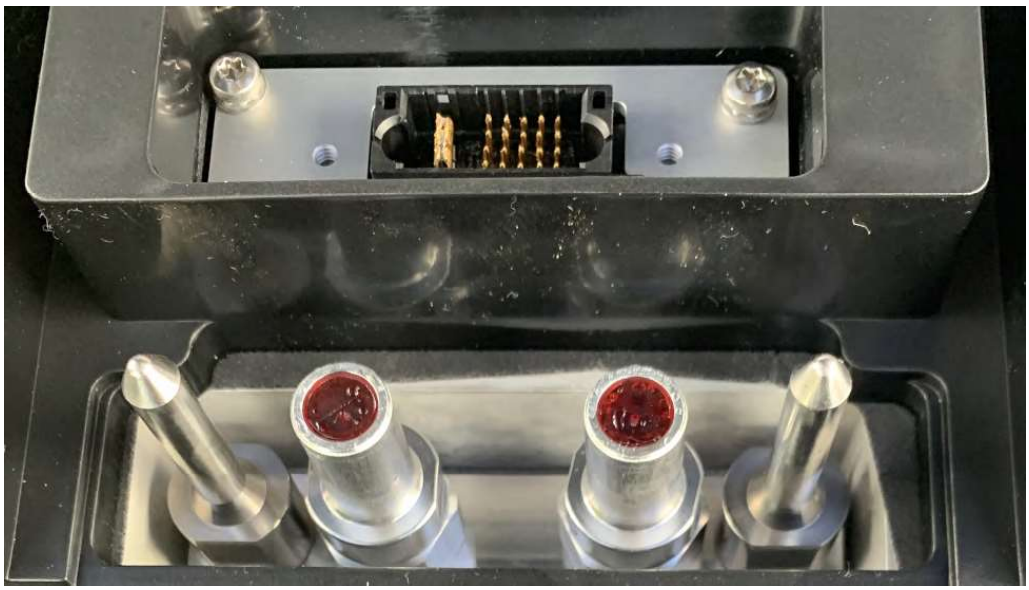
Install Power Modules

1. Remove two caps from the coolant ports on the Power Module.

2. Sync up with your lifting partner.
3. Position the Power Module with the data connector above the coolant port (align with the module mate).

WARNING: Two-Person Lift

- You need a partner to move this part.
- Ensure you have a good grip.
- Use proper form when you lift: Bend your legs, *not* your back.



4. Insert the Power Module onto the rack.
   Slide the Power Module in until the latch locks.

IMPORTANT: Install Power Modules from lowest to highest.

CAUTION:

- Always refill coolant when you install a *new* Power Module.
- If you reinstall the *same* Power Module, you may still need to top off coolant.

Install the Lower Heat Exchanger

Note: Unpack the heat exchanger. Cut the zip ties (if any) from the round multipin power connector.

1. Slide the heat exchanger into the lower cabinet (onto top shelf).
2. Reconnect the round multipin connector (front left):
   Push down and rotate the outer ring to screw down. Push-pull to test.

CAUTION: Check Coolant

- After you service the coolant system or remove, reinstall, or replace a Power Module, *always* refill or top off the coolant.
- You must also check the coolant level at the intervals required by the maintenance schedule in the *Operation and Maintenance Guide.*

Fill Coolant

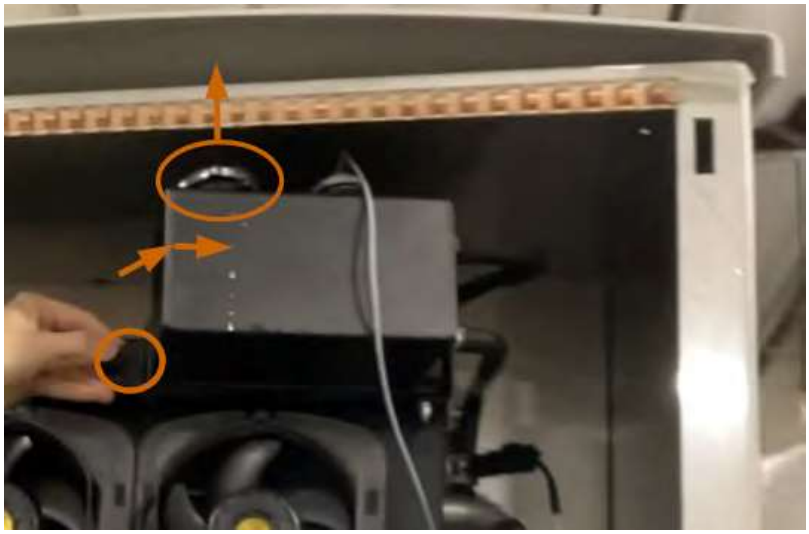
Open Reservoir

3. Open the coolant reservoir (to release pressure):
   a. Loosen the captive screw (bottom left of coolant reservoir).

      Note: If too tight to loosen by hand, use a #5 Phillips screwdriver.

   b. Pull the left side of the reservoir to rotate out. Hold it open.

c. Push down and unscrew the cap (on top of the reservoir).



Fill

1. Position the stepladder so that you can view the top of the coolant reservoir.

   Note: The reservoir port should still be open with the cap off.
2. Hold the reservoir open. Place the funnel into the reservoir.
3. Pour in new coolant through the funnel.

   Fill to the bottom of the neck of the reservoir.
4. Place the cap on the reservoir port. Tighten cap by hand.
5. Slowly release the reservoir back into position. Tighten the captive screw by hand.

Reinstall Parts, Drawdown, and Deaerate

CAUTION:

- You must "drawdown and deaerate" to clear any trapped air that may have entered the coolant system during service. The doors and covers must be reinstalled to do this.
- If you fail to do so, you may impair performance and damage components.

6. If you removed them, slide in the Power Modules.
   a. Sync up with your lifting partner.

   WARNING: Two-Person Lift
   - You need a partner to move this part.
   - Ensure you have a good grip.
   - Use proper form when you lift: Bend your legs, *not* your back.
7. If you removed it, reinstall and latch the lower door.

8. Reinstall the covers you removed.
9. Power on.

DANGER: RISK OF SHOCK
Do *not* turn on Power Block if other people are installing or servicing any other connected units.

First check that all connected units are off and no work is being performed. Inform everyone on-site of your plan and timing, follow lock out/tag out procedues, and ensure that everyone remains safe.

Alternatively, you may postpone the step to drawdown and deaerate until it is safe to do so: Continue to close up the Power Block now. Then after all units are installed and the site is clear to power on the Power Block, follow the steps to drawdown and deaerate.

10. Contact Customer Support (chargepoint.com/support) to run the drawdown and deaeration sequence to clear trapped air from the coolant system.

    Note to ChargePoint Internal: In the debug software shell, run the pump at 50% for 30 seconds.

Top Off and Reinstall Covers Again

11. Remove the upper cover.
12. Top off the coolant.
13. Place the cap on the reservoir port. Tighten cap by hand.
14. Slowly release the reservoir back into position. Tighten the captive screw by hand.

Reinstall Transparent Shields

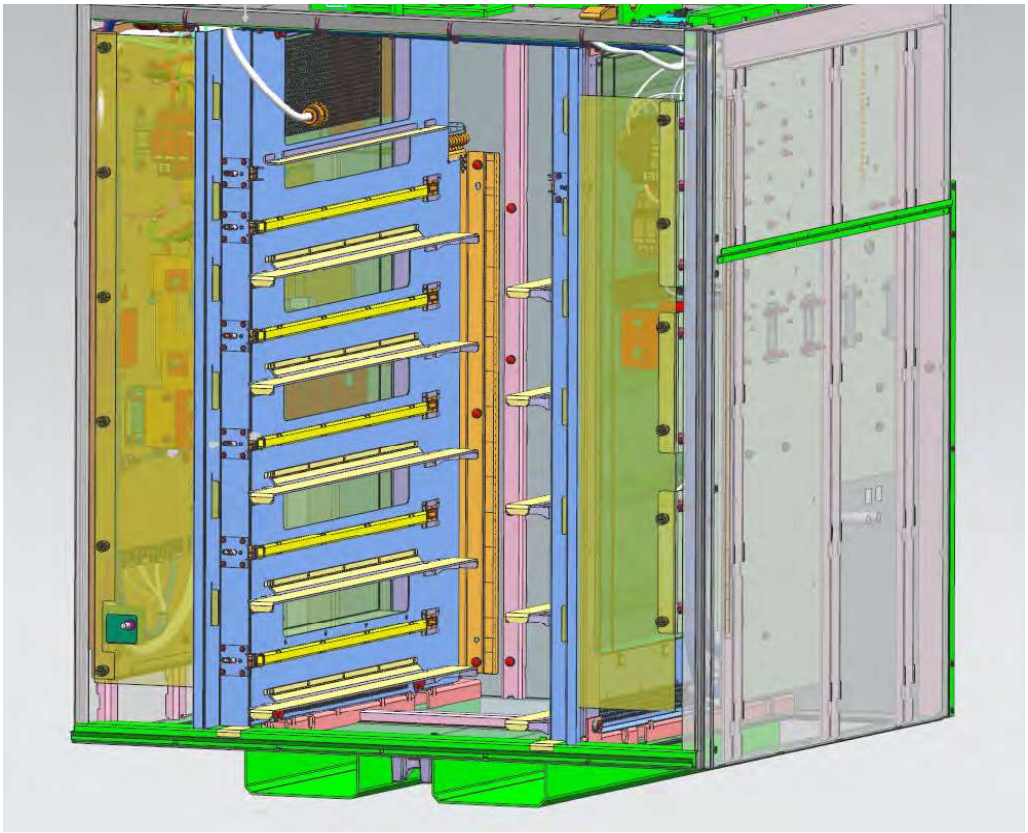
1. Align the tabs (on the transparent panel) with the slots in the racks.

   Insert the tabs into the slots.

   Note: Left shield only: Align the hole over the door switch.

2. Tighten the captive screws by hand.

   Note: If unable to do so by hand, use a #5 Phillips screwdriver.

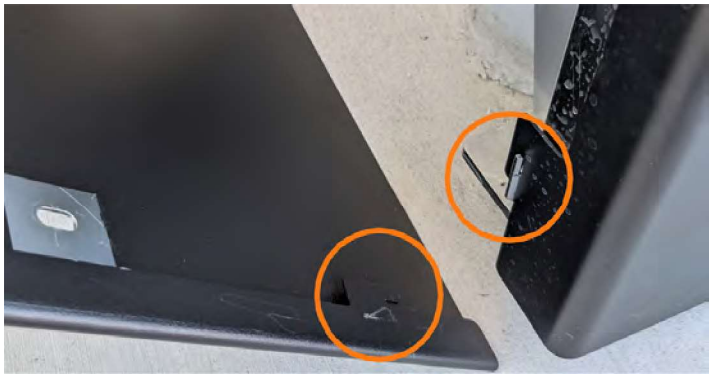


Install Power Block Covers and Door

Pedestal Covers

1. Upper Covers (front and rear pedestal):
    a. Align the cover. Install five M6 screws into the rear upper cover. Torque to **10 N·m (88.5 in-lb).**
    Tool: T30 Torx driver
    b. Repeat with the front upper cover.

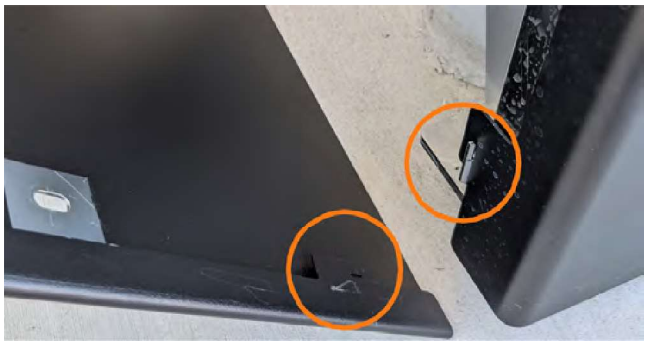
2. Lower Covers (front and rear pedestal):
    a. Notice the hooks near the bottom inside.
    Align the hooks. Slide each lower cover down onto the pedestal.
    Note: Ensure the two hooks (left and right) engage at the bottom.



b. Install two M6 screws into each cover. Torque to **10 N·m (88.5 in-lb).**

Tool: T30 Torx driver

3. Side Covers (pedestal)
    a. Notice the hooks near the bottom inside.
    Align the hooks. Slide each side cover down onto the pedestal.
    Note: Ensure the two hooks (left and right) engage at the bottom.



    b. Install five M6 screws into each side cover. Torque to **10 N·m (88.5 in-lb).**
    Tool: T30 Torx driver

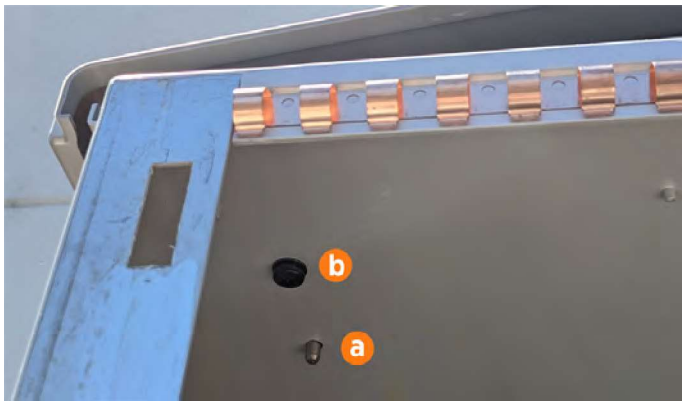
Lower Front Door

1. Hook the bottom of the door onto the lip of the cabinet.

2. Align and fasten the two latches at the top.

Enclosure Top Cover

1. Align the top cover (arched).

2. 

a. locator pin
b. screw

   a. Fit four locator pins into the corners of the top inside.
   b. Install four M6 screws into the corners of the top inside. Torque to **10 N·m (88.5 in-lb).**

      Tool: T30 Torx driver

Enclosure Side Covers

1. Slide the four side covers into the rails. **Note:** Panels are identical.

Upper Side Covers

2. Install four M6 screws on the front edge. Install four on the rear edge. Torque to **10 N·m (88.5 in-lb).**

   Note: Start with the bottom corner.

   Tool: T30 Torx driver

3. Repeat on the second upper side cover.

Lower Side Covers

4. Install three M6 screws on the front edge, and three on the rear edge of both lower side covers.

   Torque to **10 N·m (88.5 in-lb).**.

   Tool: T30 Torx driver

   Note: You can access all four screws on each upper cover, but only three on each lower cover (because the pedestal overlaps the fourth screw).

5. Repeat on the second lower side cover.

Enclosure Front and Back Covers

a. upper
b. middle
c. lower front
d. lower rear (notch on bottom right)

Lower and Middle Covers

1. Start with the lower cover. **Note:** *Rear* lower cover has a small notch (bottom right)
2. Align the four hooks at the bottom, then the top corners. Shift the cover into position.

3. Repeat with the middle cover.

Upper Cover

4. Hang the upper cover at all four corners.
   Push down to engage.

Lock

5. Lift open the security panel.
6. Lower the metal tab to align the two holes.

7. Insert the padlock through the two holes.
8. Lock the padlock.

Power Link Configurations 3

The Power Link is available in multiple configurations. Instructions vary for each.

Before proceeding, check your site plans for the station configuration.

Continue to the applicable instructions:	
Install standard pedestal. • concrete pad • surface conduit entry (*coming soon*)	Install mounted off the ground "overhead." • wall • post • gantry • other approved surface

Pedestal
one charging cable

Pedestal
two charging cables

Tool Balancer

Overhead
(mounted to a wall, post, gantry, or other surface)

Note: Only one charging cable can operate at a time.

Install Power Link 4

(Standard Pedestal)

Follow these instructions to anchor, install, and wire each Power Link as a pedestal mount.

CAUTION: To protect the charging cables from damage, keep them wrapped throughout the installation process.

IMPORTANT: Height Constraints

- If the site has height constraints for installation, contact ChargePoint to get the instructions and clearances that you will need for the modified process.

  Alternatively, you may use a forklift bracket kit, or a crane with lifting shackles and a spreader bar (constraints may differ among sites).

Disconnect Power

DANGER: RISK OF SHOCK

- *Before* any procedure, the technician must *disconnect the power.*
- Follow 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.
- Then *wait the required time* for *energy to dissipate* (see label on unit) before service. Do not remove signs or panels yet.
- *Keep power off* until all cover panels are correctly reinstalled and the work is complete.

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

1. Disconnect power at the site electrical panel.

   Follow standard practice and local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding.

2. Use a multimeter to test that power is off.

Prepare Power Link Pad

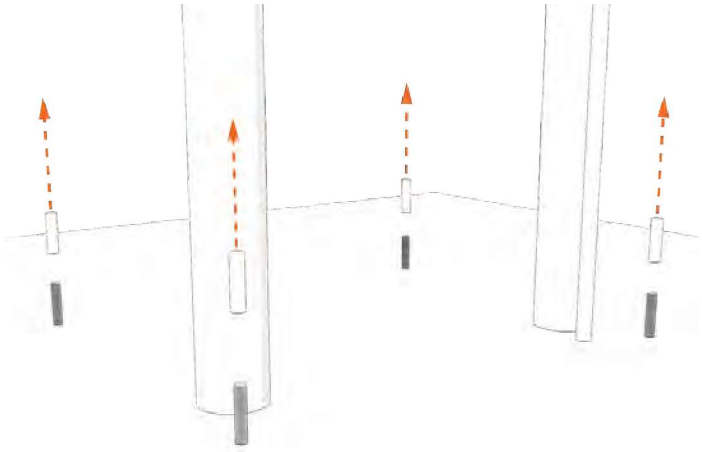
If not already done, do the following:

1. Ensure all DC conductor, 48 V DC, and Ethernet conduit stub-ups (if applicable) are 102–160 mm (4–6.3 in) high.

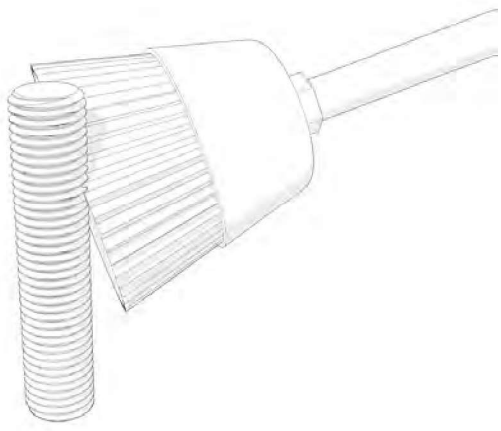
   If armored cable is used, strip the outer jacket to the same height.

   Tool: conduit cutter, cable cutter

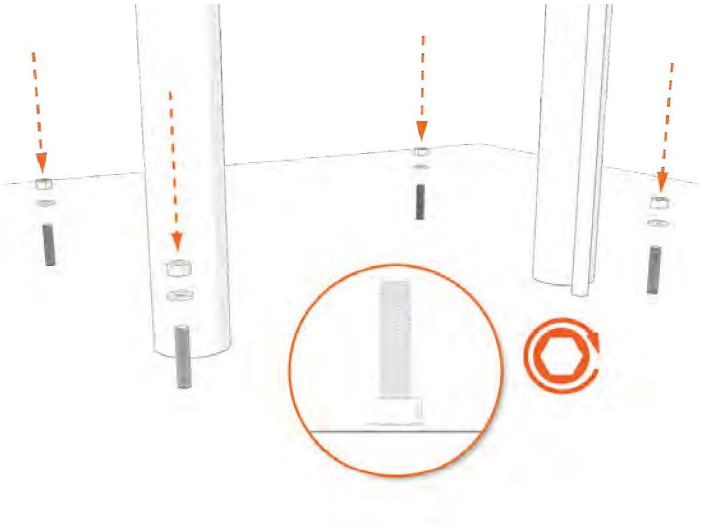
2. Remove plastic caps from all anchor bolts on the concrete pad.



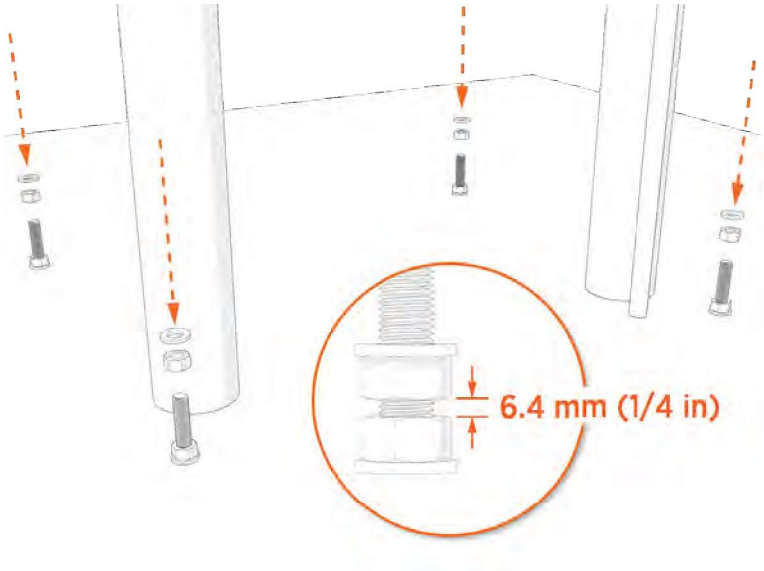
3. Use a wire brush to clean concrete off of bolt threads.



4. Install one concrete clamp washer and M16 nut onto each of the four anchor bolts. Torque to **54 N·m (40 ft-lb). Tool:** 24 mm socket wrench

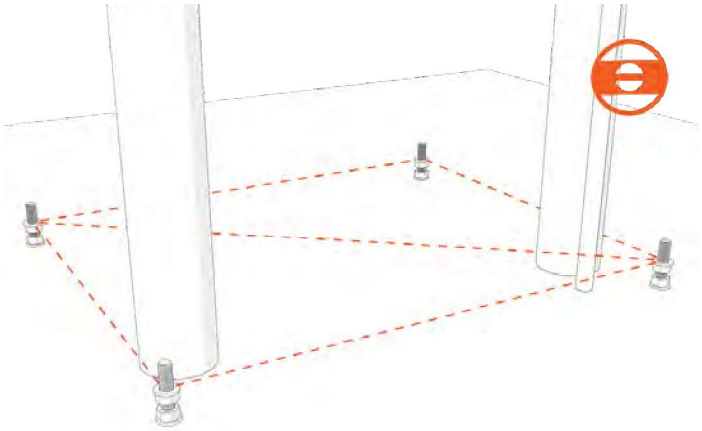


5. Install four washers and four M16 "leveling" nuts and onto the bolts by hand. Maintain a space of ~6.4 mm (1/4 in) between each leveling nut and bottom nut.



6. Check that leveling nuts are level with each other.

   Tool: level



7. Pull service wiring through the conduit (see the Express Plus *Site Design Guide*).

   Retain 1524 mm (60 in) of service loop for each cable.

> **CAUTION:** Do not use bell ends on the conduit. They can interfere with tolerances inside the enclosure.

Mount and Secure Power Link

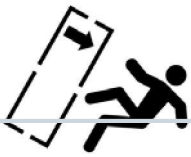
(Standard Pedestal)

CAUTION: To protect the charging cables from damage, keep them wrapped throughout the installation process.

Unpack

1. Transport the crate (upright) to the installation site. Then lay it down.

   WARNING: THE CRATE IS HEAVY AND CAN CAUSE INJURY OR DEATH IF DROPPED. DO NOT STAND OR WALK BENEATH THE CRATE WHILE IT IS BEING MOVED. TAKE PRECAUTIONS AGAINST THE CRATE TIPPING OR SLIDING.



2. Lift off the crate cover.
3. Set aside the separate packages that came inside the crate.

   Note: These packages contain other parts (to install later), such as the vinyl signs, trims, and top cover (helmet).
4. Remove the top foam inserts to uncover the Power Link.
5. At the top of the Power Link, locate four preinstalled eye bolts and lifting straps.

Access Base of Cabinet

6. Open lower door:

   IMPORTANT: Keep components in a cool area out of direct sunlight until you reinstall them.

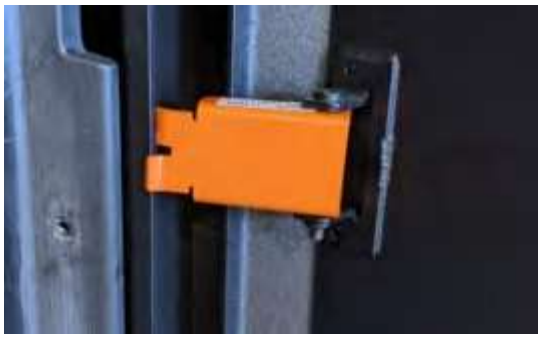
   a. Loosen the two screws from the door bracket. **Tool:** T25 Torx driver

      Hold the middle of the door bracket. Lift and tilt out.

b. Uninstall the four screws (along the left) to open the door.

Tool: T25 Torx security driver

c. At the hinges inside the door, rotate the wind stops (orange) into the door gap (to prevent the door from accidentally closing while you work).



7. Inside the lower cabinet, uninstall these (to access inside the cabinet bottom):
   a. Lower Safety Panel (if present):
      i. Loosen the three screws (right side).
      ii. Tilt out the right side.

      Slide the panel out of the slots.

      Tool: T25 Torx driver

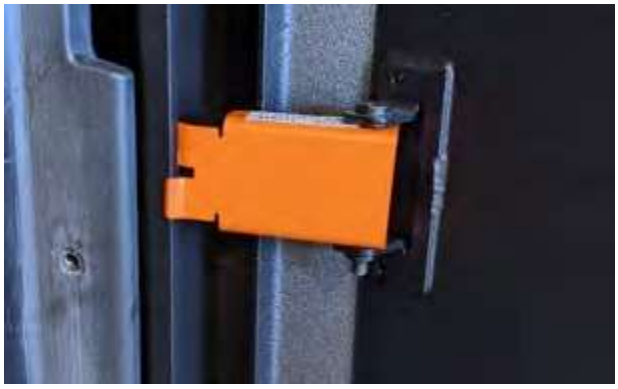
b. Gland Plate (at bottom):
Uninstall four M5 screws.
Tool: T25 Torx driver

8. Temporarily reinstall the lower door (the outermost exterior door):
   a. Disengage the wind stop.
   b. Tighten four M5 screws by hand.

Note: The upper door should still continue to be closed until a much later step.

Position the Power Link

9. Thread the lifting straps through the eye bolts on the Power Link.
10. Move and suspend the Power Link above the concrete pad. Keep it elevated.
Tool: forklift (or crane)
11. Loosen four M5 screws to open the lower door again.
Engage the wind stops.



12. Route wiring up through bottom.

13. Align the holes with the anchor bolts.

    Slowly move the Power Link down onto the anchor bolts.

    Continue to pull wiring up through bottom.

    Tool: forklift
14. Provide slack to the lift straps, but keep them attached.
15. When the Power Link is fully seated, check that all four sides are level (vertically and horizontally).

    If not, adjust three leveling nuts.

    Tool:

    - level
    - 24 mm socket wrench
16. Partially install a washer and "top" nut onto each of the four bolts by hand.

    Note: Do not tighten yet.
17. Recheck and adjust three leveling nuts as needed.
18. When Power Link is level, rotate the fourth leveling nut until flush against the Power Link base.
19. Torque the top nuts to **95 N·m (70 ft-lb).**

    Tool: 24 mm socket wrench
20. Remove the lift straps and eye bolts.

Gland Plate

21. Punch openings in the gland plate for these conduits:
    a. DC input conduits
        a. Check if the site plans require one or two DC conduits.
        b. Use the gland plate pilot holes as a guide.
        c. Punch out one or two DC opening(s).
    b. 48 V DC and Ethernet conduits
        a. Check if the site plan requires one, two, or three conduits (middle of gland plate).
        b. Punch out the correct number of 48 V DC and Ethernet opening(s).

    Note: Match the size of each conduit. Each opening must be large enough for the *entire conduit* to pass through, *not* merely the conductors.

    Tool: hydraulic hole punch
22. Reposition the gland plate on the bottom inside the Power Link.

23. Pull all conductors through the corresponding openings in the gland plate.

IMPORTANT: Do not reinstall the gland plate yet.

Connect Power Link Wiring

(Standard Pedestal)

DANGER: RISK OF SHOCK

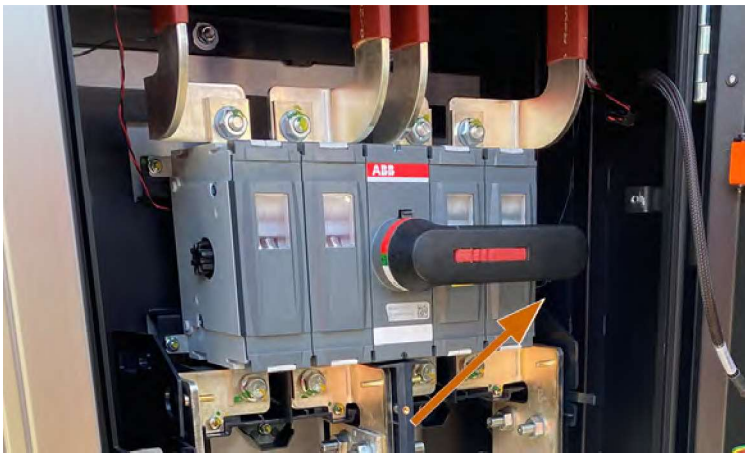
- *Before* any procedure, the technician must *disconnect the power.*
- Follow local code to *de-energize* the applicable circuit and lock out/tag out the disconnect before proceeding. Use a multimeter to test that power is off.
- Then *wait the required time* for *energy to dissipate* (see label on unit) before service. Do not remove signs or panels yet.
- *Keep power off* until all cover panels are correctly reinstalled and the work is complete.

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

1. If you did not already, do this:
   a. Disconnect power at the site electrical panel.

      Follow standard practice and local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding.

   b. Use a multimeter to test that power is off.
2. Determine if the Power Link has a maintenance switch preinstalled or not.



Maintenance Switch

IMPORTANT: If a maintenance switch is preinstalled, land conductors only on *lower* bus bars.

The upper and lower bus bar plates look similar. Both sets are inscribed (A-, A+ [single] or A-, A+, B-, B+ [dual]) and have lug nuts preinstalled.

2. Ensure the lower cover remains off and door is open, so you can access the lower bus bars.

3. Skip to Install DC Conductors.

No Maintenance Switch (Additional Steps)

IMPORTANT: If *no* maintenance switch, land conductors only on *upper* bus bars.

The upper and lower bus bar plates look similar. Both sets are inscribed (A-, A+ [single] or A-, A+, B-, B+ [dual]) and have lug nuts preinstalled.

2. Access the upper bus bars:

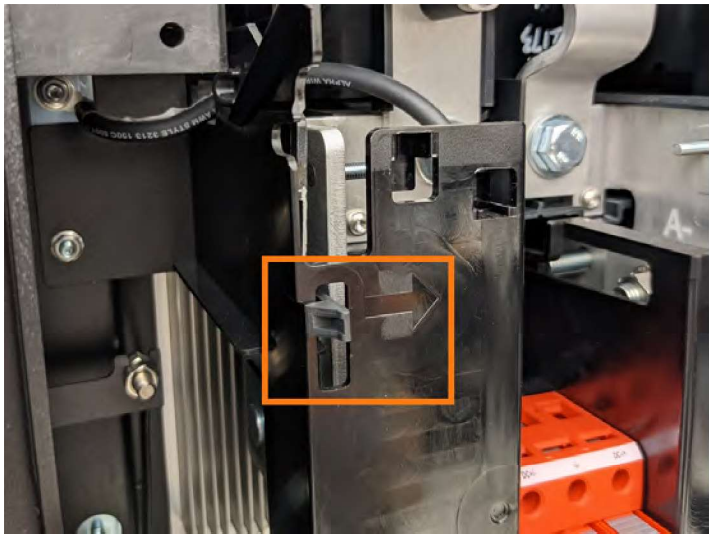
   a. Disconnect the Ethernet cable from the Ethernet surge suppressor (upper cabinet).

      Note: Take a photo or note to later identify which port.

b. On the power plate cover, loosen the two captive screws by hand. Remove the cover.

c. Release the tabs on the upper safety cover.

Lift up from the bottom of the cover until it locks in the open position.



Install DC Conductors and Lugs, and Ground Wire

1. Ensure you have de-energized the applicable circuit and locked out/tagged out the disconnect according to standard practice and local code before proceeding.
2. Use a multimeter to test that power is off.
3. Route all conductors into the correct area within the cabinet:

Maintenance Switch	No Maintenance Switch
lower cabinet	upper cabinet
	

Measure and Cut

4. Loosely install lugs only (without the conductors) onto bus bars. Hand-tighten.

   Note: Use included bolts, washers, and nuts.

5. Measure the length from each conductor to its corresponding lug.

   Mark each conductor at the point where you will need to trim it.

   Tool: permanent marker

   IMPORTANT: Match the A and B *Power Link* bus bars to the A and B *Power Block* bus bars.

   Note: DC bus bars are marked in order from left to right:

Single Input	Dual Input
A- A+	A- A+ B- B+

6. Strip and cut the conductors to the desired length.

   Tool: cable cutter

DC Lugs

7. Uninstall the lugs (if you installed them to measure length).

   Crimp a lug onto each conductor.

   IMPORTANT:

   - Use compression lugs with the specifications in indicated in Tools and Materials.
   - Use the lug manufacturer's tool and die.
   - If required, heatshrink or tape the crimp area to meet local code.

8. Land the DC lugs on the terminals.

   Torque nuts to **19 N·m (168 in-lb).**

   Note: Fasteners are pretreated with conductive dielectric grease.

   CAUTION: If using 500 kcmil conductors, you must use the back set of lugs to avoid interference with the surge suppressor panel.

   Tool: 17 mm (11/16 in) wrench for nuts

9. Mark all torqued power connections.

   Tool: torque paint pen

DC Ground Wire

10. Land the ground wire onto a ground stud on the side of the frame.

    Torque to **6.8 N·m (60 in-lb).**

    Tool: 10 mm nut driver

11. **Additional Step: Upper Cabinet (no maintenance switch) or "Overhead" Mounted Installations:**
    a. Tilt down the upper safety cover to close.
    b. Position the power plate cover. Hand tighten the two captive screws.
    c. Reconnect Ethernet cable(s) to upper Ethernet surge suppressor into the *same ports* as before.

48 V DC Wiring

12. Check the 48 V DC wiring requirements in the site plans:

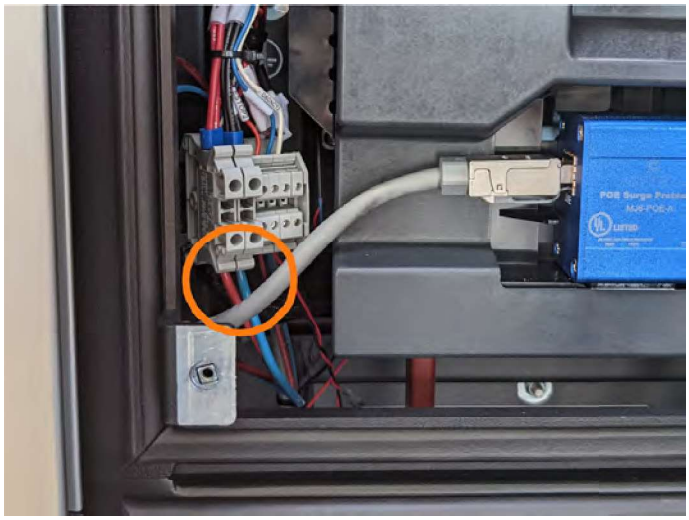
Site Wiring	48 V DC Wire Size	Conduit Size	Maximum Installed Within Conduit	If 2nd Ethernet Is Required	
				Conduit	Maximum Within
Power Block directly to Power Link	16 mm^2 (6 AWG)	21 mm (¾ in) trade size	• 2 wires and • 1 Ethernet cable	additional 21 mm (¾ in) trade size	• 2 wires and • 2 Ethernet cables
Power Block directly to Power Hub	16 mm^2 (6 AWG)	21 mm (¾ in) trade size	• 2 wires and • 1 Ethernet cable	additional 21 mm (¾ in) trade size	• 2 wires and • 2 Ethernet cables
Power Hub directly to a single Power Link	6 mm^2 (10 AWG)	21 mm (¾ in) trade size	• 2 wires and • 1 or 2 Ethernet cables	—	

Note: Use only copper conductor wire rated for 90°C.

13. Strip the 48 V DC wires.
14. Loosen each terminal tab (upper cabinet, left side).

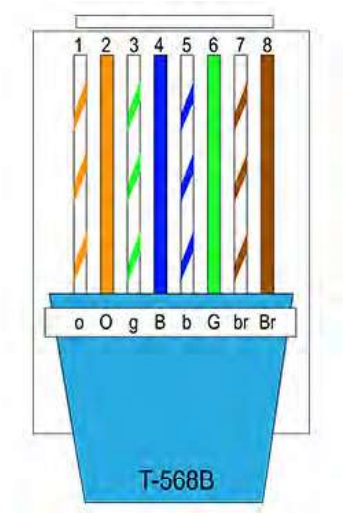
    Tool: 2.5 mm (3/32 in) tip flathead screwdriver
15. Seat the 48 V DC wires.

    Tool: 2.5 mm (3/32 in) tip flathead screwdriver. Push-pull to test.



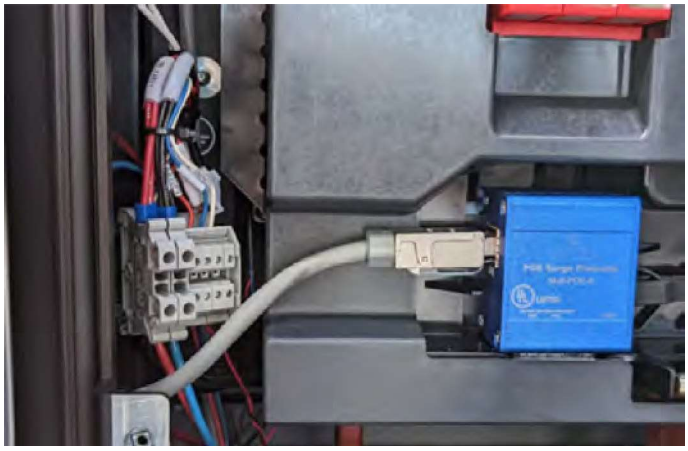
Cat6 STP Ethernet Cable

16. Trim the Cat6 STP Ethernet wires to length and allow for a service loop.
17. Terminate both ends and field crimp each Cat6 STP Ethernet wire onto a shielded connector. Use a straight-through T568-B pattern.



IMPORTANT: *Do not* connect the shield wire here at the Power Link termination.

18. Test each Ethernet wire for functionality.
19. Identify which blue surge suppressors already have cables in the line-out (right) positions. Connect the Ethernet connectors to those surge suppressors at the line-in (left) positions. Push-pull to test.



Secure and Seal Gland Plate

1. Vacuum all wire ends and metal shavings.
2. Secure wiring with clips as needed.
3. Align the gland plate with the screw holes.

   Install four M5 screws.

   Tool: T25 Torx driver
4. Use duct seal compound to seal inside each conduit opening.

5. Use duct seal compound to seal the gland plate around and to each conduit.

Reinstall Lower Safety Panel

6. Reinstall the lower safety panel (if you removed it):
    a. Slide in the panel behind the slots on the left.
    b. Install three screws (right side). Torque to **2.8 N·m (25 in-lb).**

    Tool: T25 Torx driver

Install Power Link DC Smart Cable

(Standard Pedestal)

(Direct Current [DC] Charging Cable)

DANGER: RISK OF SHOCK

- *Before* any procedure, the technician must *disconnect the power.*
- Follow 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.
- Then *wait the required time* for *energy to dissipate* (see label on unit) before service. Do not remove signs or panels yet.
- *Keep power off* until all cover panels are correctly reinstalled and the work is complete.

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

Remove Top Access Panel, L-Shaped Bus Bar Cover, and Semitransparent Shield

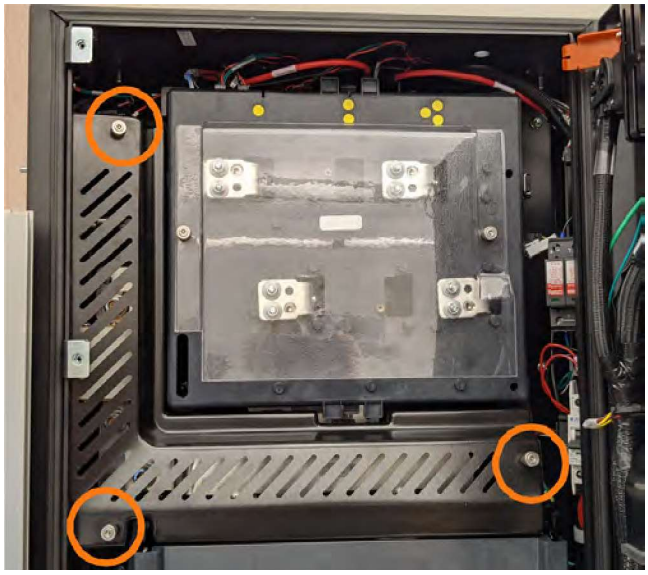
1. Remove the top access panel:
   a. Position a stepladder so you can reach above the top access panel.
   b. Loosen four captive screws in the top access panel.

      Lift off the panel.

      Tool: T25 Torx security driver

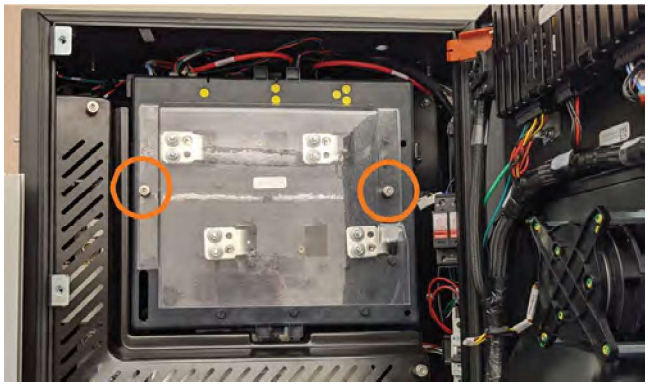
2. Inside the upper cabinet, remove the L-shaped bus bar cover and the semitransparent shield:
    a. Loosen three captive screws. Lift the L-shaped bus bar cover off the keyholes.

    Tool: T25 Torx security driver

    b. Loosen two captive screws to remove the semitransparent shield in front of the contactor box (MDS).
    Tool: T25 Torx security driver

    Note: Starting mid-2022, models may use M5 nuts instead. **Tool:** 8 mm socket hex nut driver

3. Unwrap the charging cable.

Route Into Cabinet

1. Route the connectors, DC cables and lugs, ferrite ring, and ground wire into the upper cabinet (through the opening behind the cable housing).

    Note: Tilt the ferrite ring to fit through the opening.

    If you removed the zip tie, attach a removable zip tie to the cables and ferrite ring.

Cable Housing

2. Align the cable housing onto the pegs. Torque the four screws to **4.5 N·m (40 in-lb).**

    Tool: T25 Torx security driver

    Note: Hold or clamp the cable housing in position.

Ground Wire, Ethernet, and 48 V Connectors

3. Locate the bolt near the cable housing, inside the upper cabinet, toward the front.

   Install two ground wires for each charging cable (two ground wires for the right charging cable, two for the left). Secure the wires with a nut.

   Torque to **6.8 N·m (60 in-lb).**

   Tool: 10 mm (3/8 in) deep socket hex nut driver

Left

Right

4. Locate the right or left wire harness (at either side of the upper cabinet).

   Connect one 48 V four-pin power connector to the wire harness for each charging cable (right or left).

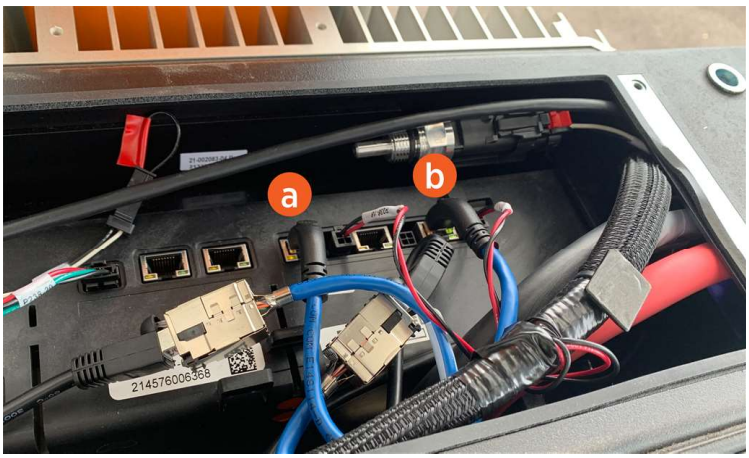
Left

Right

CAUTION:

- If you switch connector ports, you could cause charging cable misidentification or disrupt status reporting between the local system and the ChargePoint Cloud Dashboard.
- If you don't attach lugs to their correct plate locations, you could reverse positive (red) and negative (black) polarity. This could damage the station or vehicle.

5. Ensure that the stepladder is positioned for you to access in through the top access panel.
6. At top of contactor box, connect one Ethernet connector for each charging cable:

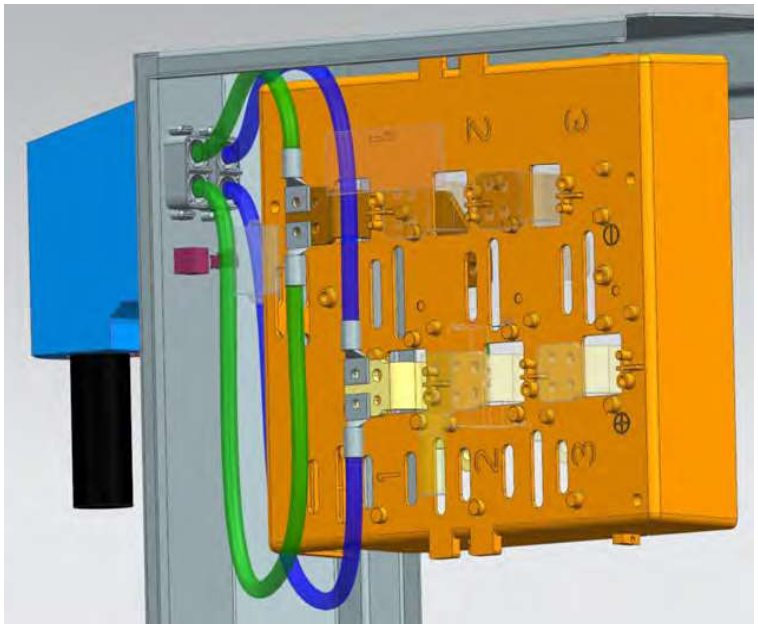


a. one Ethernet connector for *left* charging cable
b. one Ethernet connector for *right* charging cable

DC Lugs and Nuts

7. Land each positive and negative DC lug with a nut to its correct plate location.
   a. Two or Four Lugs per Charging Cable:
      For *each* charging cable, install *either* two *or* four lugs:
      i. four DC lugs *for each charging cable* of 350 A
      or
      ii. two DC lugs *for each charging cable* of 250 A or less
   b. Left or Right Plate:
      You must install *each* charging cable lug to *either* a left *or* right plate (to ensure proper cable identification).
   c. Upper or Lower Plate:
      You must install *each* charging cable lug to *either* an upper *or* a lower plate to maintain the correct negative (black) or positive (red) polarity.

CAUTION: If you don't install lugs to the correct plate locations, you could reverse positive (red) / negative (black) polarity. This could damage the station or vehicle.



8. Torque the nut on each DC lug to **6.8 N·m (60 in-lb).**
   Tool: 10 mm (3/8 in) deep socket hex nut driver
9. Mark all torqued power connections.
   Tool: torque paint pen
10. Repeat these steps on the other side to install a second charging cable.
    Note: Some installations only have one charging cable.

Reinstall Semitransparent Shield, L-Shaped Bus Bar Cover, and Top Access Panel

1. Reinstall the semitransparent shield and the L-shaped bus bar cover:
    a. Align the notch of the semitransparent shield at the lower left in front of the contactor box to reinstall. Torque the two M4 screws to **1.1 N·m (10 in-lb)**. **Tool:** T25 Torx security driver
    Note: Starting mid-2022, models may use M5 nuts. Torque to **2.8 N·m (25 in-lb)**. **Tool:** 8 mm socket hex nut driver
    b. Align the L-shaped bus bar cover to hang from the keyholes.
    Torque the three M4 screws to **1.1 N·m (10 in-lb)**.
    Tool: T25 Torx security driver
2. Reinstall the top access panel:
    a. Use a stepladder to position yourself above the top access panel.
    b. Position the top access panel with the notch at the front.
    c. Torque the four M4 screws to **2.8 N·m (25 in-lb)**.
    Tool: T25 Torx security driver

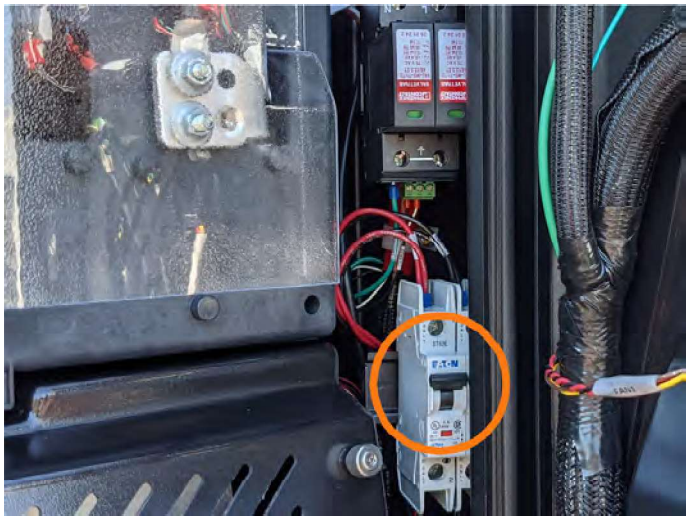
Note: Next you will finish up inside the cabinet and reinstall all covers. *Then* you will install *either* the standard cable management kit (CMK) with swingarms *or* a tool balancer.

Install Power Link Doors and Vinyl Signs

(Standard Pedestal)

Power On 48 V

1. Locate the 48 V DC breaker in the upper cabinet next to the door hinge.



2. Flip *up* the switch to ON.
   The indicator light should turn *red.*

Install Upper Door

1. Disengage wind stops at the hinges inside the door. Close the door.
2. Torque the four M5 screws on the door to **4.5 N·m (40 in-lb).**
   Tool: T25 Torx security driver
3. On the right side of the door, insert the bottom of the door bracket.
   Tilt in the top of the door bracket. Push down into position.
4. Torque the two M5 screws on the door bracket to **1.1 N·m (10 in-lb).**
   Tool: T25 Torx driver

Note: If your unit has a lower safety panel that you did not yet reinstall, do so now.

Install and Connect Holsters

1. Match each holster to the connector type for each charging cable on each side.
2. Fit the correct holster into the opening (at center of exterior door).
   Install four screws into each holster. **Tool:** T25 Torx driver

3. Optional lock feature:

Route and connect the wiring to each holster:

a. Route the wiring harness through the notch (at right) in the lower safety panel.

b. Locate the markings "1" and "2" on the housing at the base of the wires.

c. Connect the holster near the door *hinge* to wire "2."

d. Connect the holster near the door *opening* to wire "1."

IMPORTANT: Route the holster wiring correctly to avoid charging cable misidentification or disruption to status reporting between the local system and the ChargePoint Cloud Dashboard.

Power On Maintenance Switch

1. Push *down* the lever to ON.

Note: Some Power Link installations have *no* maintenance switch.

Install Lower Door

1. Disengage wind stops at the hinges inside the door. Close the door.
2. Torque the four M5 screws on the door to **4.5 N·m (40 in-lb).**
   Tool: T25 Torx security driver
3. On the right side of the door, insert the bottom of the door bracket.
   Tilt in the top of the door bracket. Push down into position.
4. Torque the two M5 screws on the door bracket to **1.1 N·m (10 in-lb).**
   Tool: T25 Torx driver

Install Vinyl Signs, Trim, and Top Cover

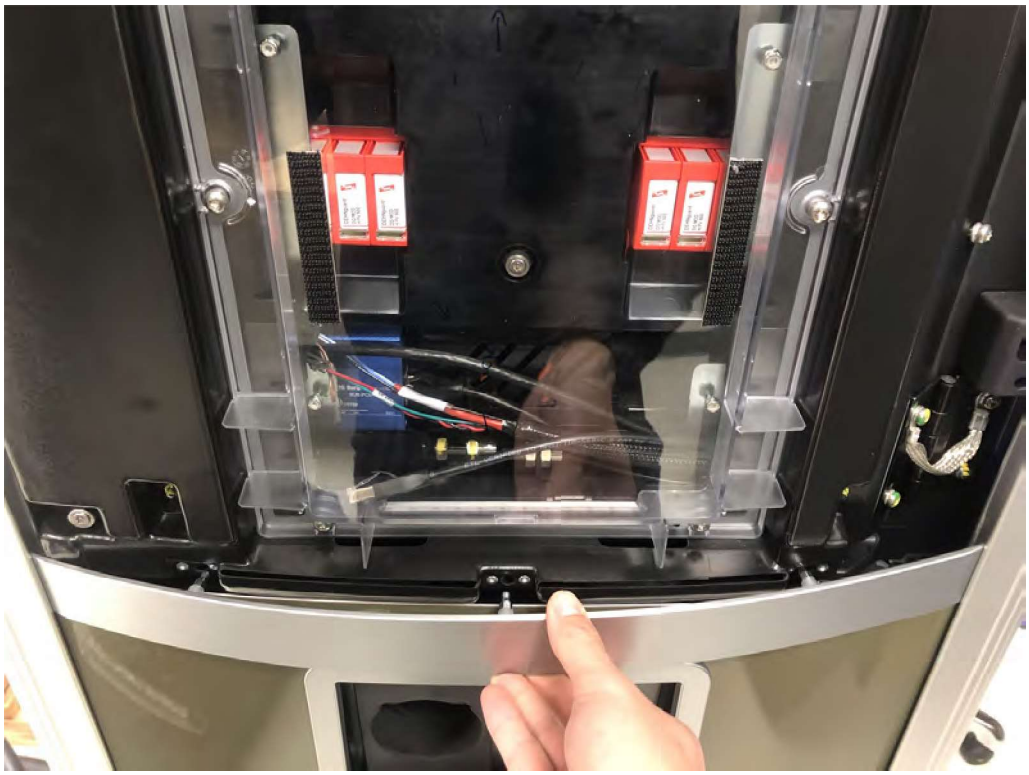
a. top cover
b. upper trim
c. interactive display trim (optional)
d. middle trim
e. upper vinyl sign
f. holster trim
g. lower trim
h. lower vinyl sign

1. Push in the lower trim until it engages with the center and side clips.
2. Insert the lower vinyl sign behind the lower trim.
   Simultaneously insert both sides of the lower vinyl sign.
3. Insert the upper end of the holster trim and push in all sides.
   Note: You may need to flex slightly.

4. Insert the upper vinyl sign into each side. **Note:** Logo is on upper left.

5. Align the upper vinyl sign and the ends of the middle trim.
   Hold the vinyl sign in position so that it does not block the trim clips.

6. Push in the middle trim until it engages with the center and side clips.



7. Align the upper trim with the magnetic side up.

   Insert the upper trim until it snaps into position behind the edge of the top cover (helmet).
8. Insert one end of the interactive display trim and push in all sides.
9. Reinstall the top cover (helmet).
   a. Lower the top cover straight down onto the station body. Do not tilt.

      Note: ChargePoint logo is in front.
   b. Front: Torque the two M4 screws to **1.1 N·m (10 in-lbs).**

      Tool: T25 Torx security driver
   c. Back: Torque the two M5 screws to **2.8 N·m (25 in-lb).**

      Tool: T25 Torx security driver

Continue to Charging Cable Instructions

Check your site plans to identify which one of these hanging mechanisms you must install.
Follow the applicable instructions:

1. standard cable management kit (CMK) with swingarms (onto Power Link)
2. tool balancer (onto another surface)

IMPORTANT: Before the tool balancer, you *must first* mount and install the Power Link to an approved surface (wall, post, gantry,or similar structure).

Note: A CMK includes swingarms that attach directly to the Power Link station. A tool balancer is typically for medium-length cables that hang from a separate surface.

Install Swingarms Onto Station, Hang Charging Cable

(Standard Pedestal)

Identify if your site plans include a cable management kit (CMK or kit) or a tool balancer.

Note: A CMK includes swingarms that attach directly to the Power Link station. A tool balancer is typically for medium-length cables that hang from a separate surface.

Install CMK Mast, Swingarms, and Vinyl Signs

1. Partially install four screws into the rear exterior of Power Link. Use upper four holes.

   Turn each screw three times.

2. Align the keyholes (in the center mast) with the screws.

   Hang at the desired height.

   - Default height: upper and middle keyholes
   - Low overhead: middle and lower keyholes

   Torque to **6.8 N·m (60 in-lb).**

   Tool: T25 Torx driver

3. Insert two alignment pins into the bottom center of the swingarm attachment.

   Position the pins (in the swingarm attachment) into the top of the mast.

   Torque the four screws to **6.8 N·m (60 in-lb). Tool:** T25 Torx driver

4. Install the vinyl signs onto the front and rear of the mast. Bend the vinyl sign on the long axis. Slip the edges into the grooves in the mast.

Hang the Charging Cable

1. Position the stepladder so that you can reach the hanging point.
2. Attach the charging cable to the hanging point:
   a. Hold the charging cable on each side of the ball clamp.
   b. Align the anchor pin with the slot in the ball clamp.
   c. Push the ball clamp onto the pin.

3. Place each charging cable in the holster.
4. Untangle any twists.
    a. Check that the charging cables and swingarms operate smoothly by fully extending and retracting.
    b. If you find limited motion or retraction, contact ChargePoint at chargepoint.com/support.

Complete Installation

Skip to Verify and Adhere Labels and continue from there.

Install Power Link 5

("Overhead" Mounted Variant)

Follow these instructions to anchor, install, and wire each Power Link onto a wall or gantry.

DANGER: Check the site plans for the number and type of fasteners required to install the mounting plate and the Power Link.
Fasteners must be appropriate and rated for the type of surface and the combined weight of the Power Link and all charging cables and accessories.

If not, the Power Link could fall and injure people, damage property, or both.

CAUTION: To protect the charging cables from damage, keep them wrapped throughout the installation process.

Disconnect Power

DANGER: RISK OF SHOCK

- *Before* any procedure, the technician must *disconnect the power.*
- Follow 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.
- Then *wait the required time* for *energy to dissipate* (see label on unit) before service. Do not remove signs or panels yet.
- *Keep power off* until all cover panels are correctly reinstalled and the work is complete.

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

1. Disconnect power at the site electrical panel.

   Follow standard practice and local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding.

2. Use a multimeter to test that power is off.

Install and Secure Power Link to Mounting Plate

(Variant)

Mark Location

1. Use a multimeter to test each DC conductor for continuity.
2. If not already done, pull service wiring through the wall or conduit as described in the Express Plus *Site Design Guide.*
3. Measure the distance above grade that the Power Link will sit.

> **CAUTION:** Check your specific site plans and the *Site Design Guide* to ensure the Power Link mounting location meets minimum clearances above ground to comply with ADA regulations and above grade to comply with flood regulations.

4. Use the mounting plate as a template to determine position.

   Measure position and ensure level placement. Mark the mounting holes.

   Tool: level
5. Consult site plans for any site-specific requirements.
6. Attach the mounting plate to the surface:

   Install six M8 bolts or studs spaced 16 in center to center.

   Torque to the specification indicated in the site plans.

   Note: Contractor provides fasteners. Site plans must specify fasteners appropriate for and rated to secure the weight to the material.

> **IMPORTANT:** Align the vertical center of the mounting plate with the wiring (that enters from the ground or rear of the installation site).

Unpack

7. Lift off the crate cover.
8. Set aside the separate packages that came inside the crate.

   Note: These packages contain other parts (to install later), such as the vinyl signs, trims, and top cover (helmet).
9. Remove the top foam inserts to uncover the Power Link.
10. At the top of the Power Link, locate four preinstalled eye bolts and lifting straps.

Access Inside

11. Open door:

> **IMPORTANT:** Keep components in a cool area out of direct sunlight until you reinstall them.

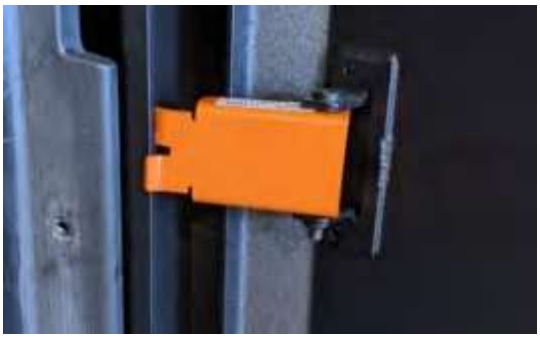
a. Loosen the two screws from the door bracket. **Tool:** T25 Torx driver

   Hold the middle of the door bracket. Lift and tilt out.

b. Uninstall the four screws (along the left) to open the door.

Tool: T25 Torx security driver

c. At the hinges inside the door, rotate the wind stops (orange) into the door gap (to prevent the door from accidentally closing while you work).



Gland Plate

12. Uninstall bottom cover:

    Uninstall four screws underneath. **Tool:** T25 Torx driver

13. Remove the gland plate (inside bottom).

14. Punch openings in the gland plate for this wiring:
    a. DC input conduits
        a. Check if the site plans require one or two DC conduits.
        b. Use the gland plate pilot holes as a guide.
        c. Punch out one or two DC opening(s).
    b. 48 V DC and Ethernet conduits
        a. Check if the site plans require one, two, or three conduits.
        b. Punch out the correct number of 48 V DC and Ethernet opening(s).

    Tool: hydraulic hole punch
15. Install glands onto the bottom of the gland plate. **Note:** Match the size of each to the wiring.
16. Thread all DC, 48 V DC, and Cat6 STP Ethernet wiring through the glands.

Lift and Mount

17. Temporarily reinstall the door:
    a. Disengage wind stops at the hinges inside the door. Close the door.
    b. Install the four M5 screws into the door.

    Tool: T25 Torx security driver
18. Lift the Power Link into position. Move the wiring out of the way.

    Note: Use a forklift or service cart with retaining straps.

19. Hook the back of the Power Link to the mounting plate.

    Align the Power Link at the center vertical of the mounting plate (so right and left are equal).

20. Open the door again.

21. Route wiring into the bottom of Power Link.

22. Attach the Power Link to the mounting plate:

    Install six fasteners called for by the site plans.

    Torque to the specification indicated in the site plans.

    Note: Contractor provides fasteners. Site plans must specify fasteners appropriate for and rated to secure the weight to the material.

Connect Power Link Wiring

(Variant)

DANGER: RISK OF SHOCK

- *Before* any procedure, the technician must *disconnect the power.*
- Follow 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.
- Then *wait the required time* for *energy to dissipate* (see label on unit) before service. Do not remove signs or panels yet.
- *Keep power off* until all cover panels are correctly reinstalled and the work is complete.

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

1. If you did not already, do this:
   a. Disconnect power at the site electrical panel.

      Follow standard practice and local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding.

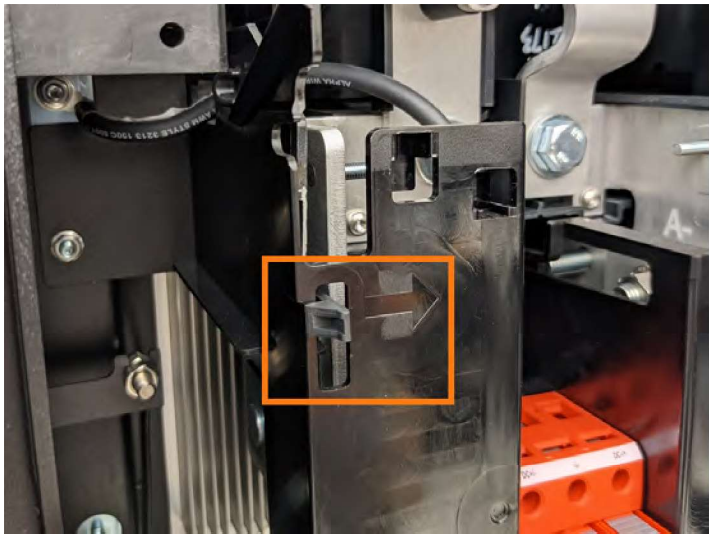
   b. Use a multimeter to test that power is off.
2. Access the bus bars:
   a. Disconnect the Ethernet cable from the Ethernet surge suppressor (upper cabinet).

      Note: Take a photo or note to later identify which port.

b. On the power plate cover, loosen the two captive screws by hand. Remove the cover.

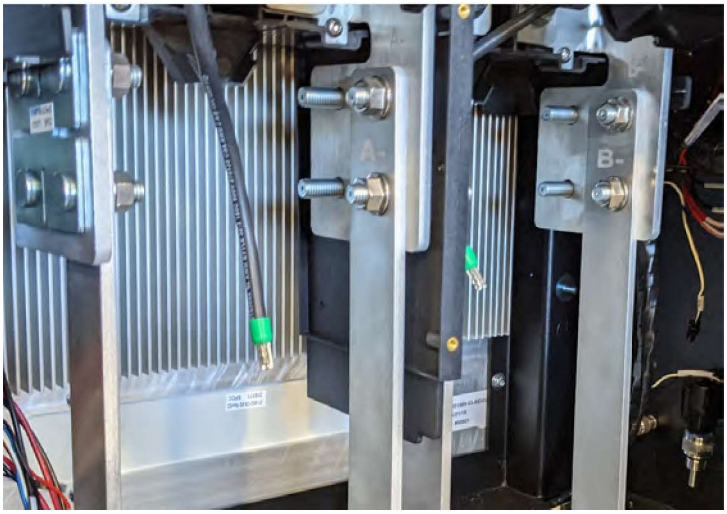
c. Release the tabs on the upper safety cover.

Lift up from the bottom of the cover until it locks in the open position.



Install DC Conductors and Lugs, and Ground Wire

1. Ensure you have de-energized the applicable circuit and locked out/tagged out the disconnect according to standard practice and local code before proceeding.
2. Use a multimeter to test that power is off.
3. Route all conductors into the correct area within the cabinet:



Measure and Cut

4. Loosely install lugs only (without the conductors) onto bus bars. Hand-tighten.

   Note: Use included bolts, washers, and nuts.
5. Measure the length from each conductor to its corresponding lug.

   Mark each conductor at the point where you will need to trim it.

   Tool: permanent marker

   IMPORTANT: Match the A and B *Power Link* bus bars to the A and B *Power Block* bus bars.

   Note: DC bus bars are marked in order from left to right:

Single Input	Dual Input
A- A+	A- A+ B- B+

6. Strip and cut the conductors to the desired length.

   Tool: cable cutter

DC Lugs

7. Uninstall the lugs (if you installed them to measure length).

   Crimp a lug onto each conductor.

   IMPORTANT:
   - Use compression lugs with the specifications in indicated in Tools and Materials.
   - Use the lug manufacturer's tool and die.
   - If required, heatshrink or tape the crimp area to meet local code.

8. Land the DC lugs on the terminals.

   Torque nuts to **19 N·m (168 in-lb).**

   Note: Fasteners are pretreated with conductive dielectric grease.

   CAUTION: If using 500 kcmil conductors, you must use the back set of lugs to avoid interference with the surge suppressor panel.

   Tool: 17 mm (11/16 in) wrench for nuts

9. Mark all torqued power connections.

   Tool: torque paint pen

DC Ground Wire

10. Land the ground wire onto a ground stud on the side of the frame.

    Torque to **6.8 N·m (60 in-lb).**

    Tool: 10 mm hex wrench

11. **Additional Step: Upper Cabinet (no maintenance switch) or "Overhead" Mounted Installations:**
    a. Tilt down the upper safety cover to close.
    b. Position the power plate cover. Hand tighten the two captive screws.
    c. Reconnect Ethernet cable(s) to upper Ethernet surge suppressor into the *same ports* as before.

48 V DC Wiring

12. Check the 48 V DC wiring requirements in the site plans:

Site Wiring	48 V DC Wire Size	Conduit Size	Maximum Installed Within Conduit	If 2nd Ethernet Is Required	
				Conduit	Maximum Within
Power Block directly to Power Link	16 mm^2 (6 AWG)	21 mm (¾ in) trade size	• 2 wires and • 1 Ethernet cable	27 mm (1 in) trade size	• 2 wires and • 2 Ethernet cables
Power Block directly to Power Hub	16 mm^2 (6 AWG)	21 mm (¾ in) trade size	• 2 wires and • 1 Ethernet cable	27 mm (1 in) trade size	• 2 wires and • 2 Ethernet cables
Power Hub directly to a single Power Link	6 mm^2 (10 AWG)	21 mm (¾ in) trade size	• 2 wires and • 1 or 2 Ethernet cables	—	

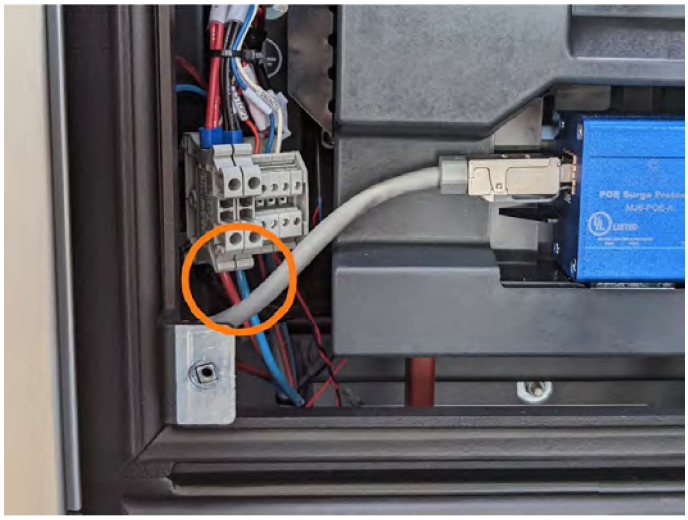
Note: **Use only copper conductor wire rated for 90°C.**

13. Strip the 48 V DC wires.
14. Loosen each terminal tab (upper cabinet, left side).

    Tool: 2.5 mm (3/32 in) tip flathead screwdriver

15. Seat the 48 V DC wires. Push-pull to test.

    Tool: 2.5 mm (3/32 in) tip flathead screwdriver

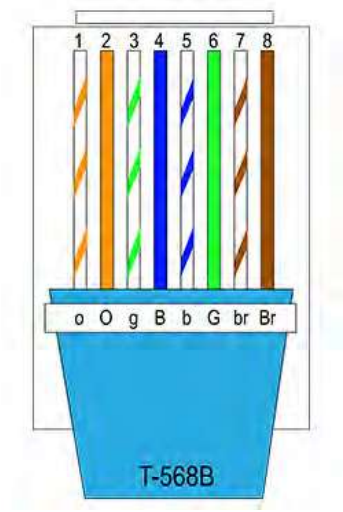


16. To close the panel, lift back of hinge.

Cat6 STP Ethernet Cable

17. Trim the Cat6 STP Ethernet wires to length and allow for a service loop.
18. Terminate both ends and field crimp each Cat6 STP Ethernet wire onto a shielded connector.

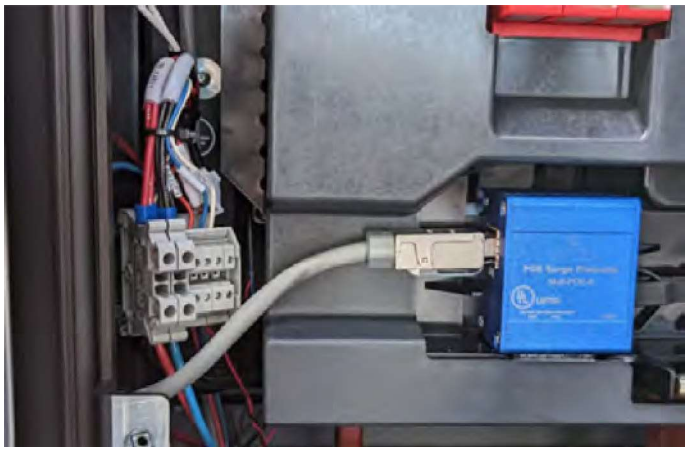
    Use a straight-through T568-B pattern.



IMPORTANT:*Do not* connect the shield wire here at the Power Link termination.

19. Test each Ethernet wire for functionality.

20. Identify which blue surge suppressors already have cables in the line-out (right) positions. Connect the Ethernet connectors to those surge suppressors at the line-in (left) positions. Push-pull to test.



Secure Gland Plate

1. Vacuum all wire ends and metal shavings.
2. Secure wiring with clips as needed.
3. Align the gland plate with the screw holes.
   Install four M5 screws.
   Tool: T25 Torx driver

Install Power Link DC Smart Cable

(Variant)

(Direct Current [DC] Charging Cable)

DANGER: RISK OF SHOCK

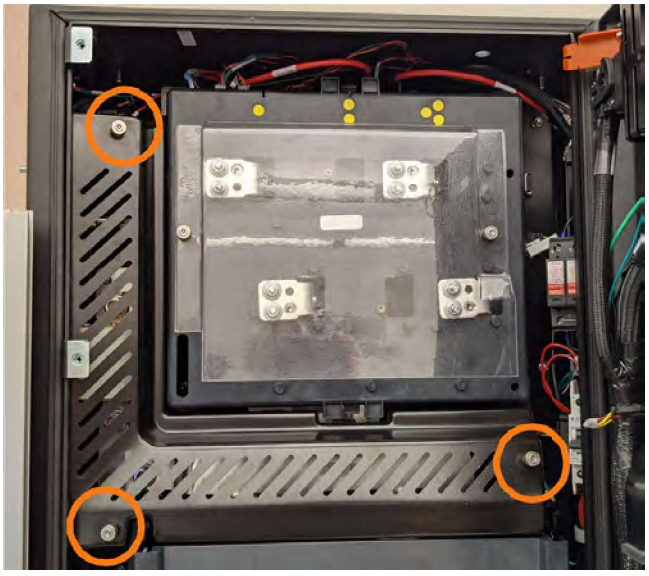
- *Before* any procedure, the technician must *disconnect the power.*
- Follow local code to *de-energize* the applicable circuit and lock out/tag out the disconnect before proceeding. Use a multimeter to test that power is off.
- Then *wait the required time* for *energy to dissipate* (see label on unit) before service. Do not remove signs or panels yet.
- *Keep power off* until all cover panels are correctly reinstalled and the work is complete.

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

Remove L-Shaped Bus Bar Cover and Semitransparent Shield

1. Inside the upper cabinet, remove the L-shaped bus bar cover and the semitransparent shield:
   a. Loosen three captive screws. Lift the L-shaped bus bar cover off the keyholes.

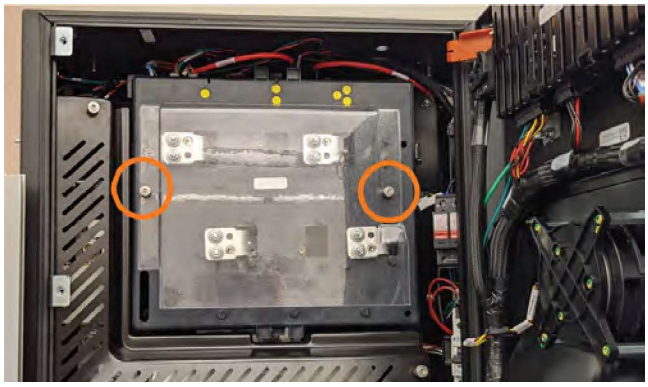
      Tool: T25 Torx security driver



b. Loosen two captive screws to remove the semitransparent shield in front of the contactor box (MDS).

Tool: T25 Torx security driver

Note: Starting mid-2022, models may use M5 nuts instead. **Tool:** 8 mm socket hex nut driver



2. Unwrap the charging cable.

Route Into Cabinet

1. Route the connectors, DC cables and lugs, ferrite ring, and ground wire into the upper cabinet (through the opening behind the cable housing).

   Note: Tilt the ferrite ring to fit through the opening.

   If you removed the zip tie, attach a removable zip tie to the cables and ferrite ring.

Cable Housing

2. Align the cable housing onto the pegs. Torque the four screws to **4.5 N·m (40 in-lb).**

   Tool: T25 Torx security driver

   Note: Hold or clamp the cable housing in position.

Ground Wire, Ethernet, and 48 V Connectors

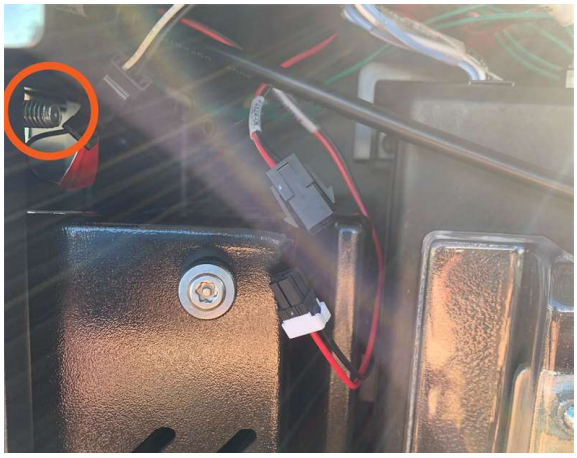
3. Locate the bolt near the cable housing, inside the upper cabinet, toward the front.

   Install two ground wires for each charging cable (two ground wires for the right charging cable, two for the left). Secure the wires with a nut.

   Torque to **6.8 N·m (60 in-lb).**

   Tool: 10 mm (3/8 in) deep socket hex nut driver

Left



Right

4. Locate the right or left wire harness (at either side of the upper cabinet).

   Connect one 48 V four-pin power connector to the wire harness for each charging cable (right or left).

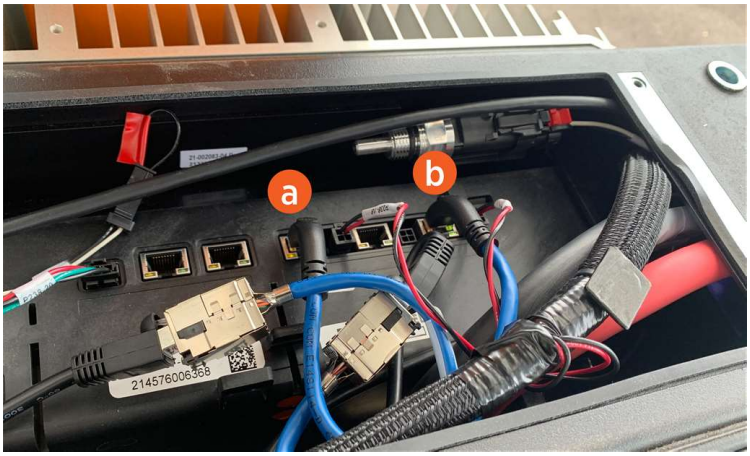
Left

Right

CAUTION:

- If you switch connector ports, you could cause charging cable misidentification or disrupt status reporting between the local system and the ChargePoint Cloud Dashboard.
- If you don't attach lugs to their correct plate locations, you could reverse positive (red) and negative (black) polarity. This could damage the station or vehicle.

5. Ensure that the stepladder is positioned for you to access in through the top access panel.
6. At top of contactor box, connect one Ethernet connector for each charging cable:

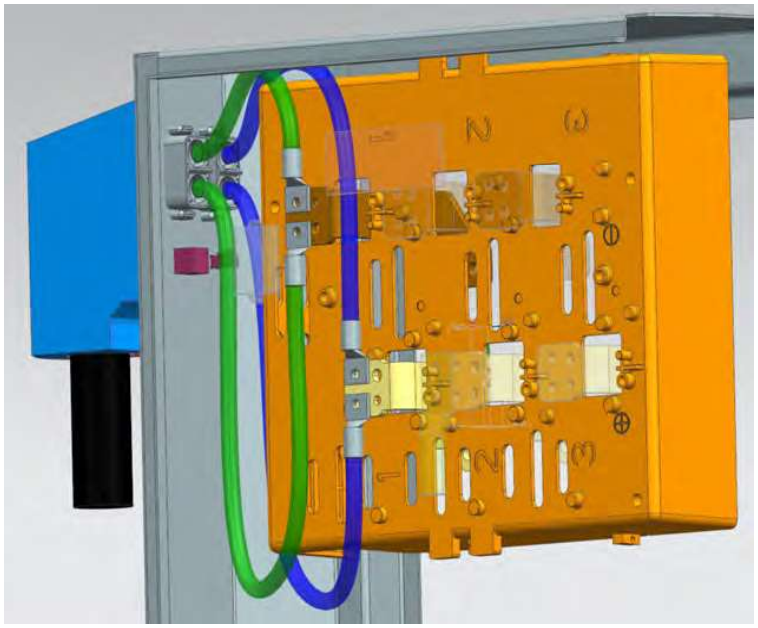


   a. one Ethernet connector for *left* charging cable
   b. one Ethernet connector for *right* charging cable

DC Lugs and Nuts

7. Land each positive and negative DC lug with a nut to its correct plate location.
   a. Two or Four Lugs per Charging Cable:
      For *each* charging cable, install *either* two *or* four lugs:
      i. four DC lugs *for each charging cable* of 350 A
      or
      ii. two DC lugs *for each charging cable* of 250 A or less
   b. Left or Right Plate:
      You must install *each* charging cable lug to *either* a left *or* right plate (to ensure proper cable identification).
   c. Upper or Lower Plate:
      You must install *each* charging cable lug to *either* an upper *or* a lower plate to maintain the correct negative (black) or positive (red) polarity.

CAUTION: If you don't install lugs to the correct plate locations, you could reverse positive (red) / negative (black) polarity. This could damage the station or vehicle.



8. Torque the nut on each DC lug to **6.8 N·m (60 in-lb).**
   Tool: 10 mm (3/8 in) deep socket hex nut driver
9. Mark all torqued power connections.
   Tool: torque paint pen

Reinstall Semitransparent Shield, L-Shaped Bus Bar Cover

1. Reinstall the semitransparent shield and the L-shaped bus bar cover:
    a. Align the notch of the semitransparent shield at the lower left in front of the contactor box to reinstall. Torque the two M4 screws to **1.1 N·m (10 in-lb).** **Tool:** T25 Torx security driver
    Note: Starting mid-2022, models may use M5 nuts. Torque to **2.8 N·m (25 in-lb).** **Tool:** 8 mm socket hex nut driver
    b. Align the L-shaped bus bar cover to hang from the keyholes.
    Torque the three M4 screws to **1.1 N·m (10 in-lb).**
    Tool: T25 Torx security driver
2. Reinstall the top access panel:
    a. Use a stepladder to position yourself above the top access panel.
    b. Position the top access panel with the notch at the front.
    c. Torque the four M4 screws to **2.8 N·m (25 in-lb).**
    Tool: T25 Torx security driver

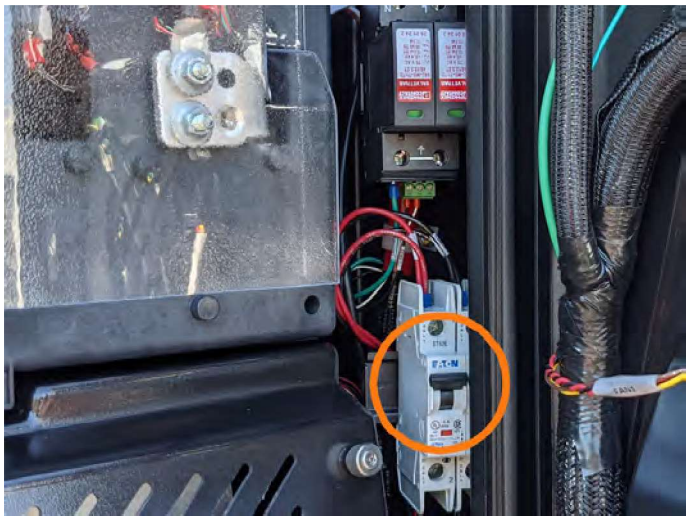
Note: Next you will finish up inside the cabinet and reinstall all covers. *Then* you will install a tool balancer.

Install Power Link Doors and Vinyl Signs

(Variant)

Power On 48 V

1. Locate the 48 V DC breaker in the upper cabinet next to the door hinge.



2. Flip *up* the switch to ON.

   The indicator light should turn *red.*

Power On Maintenance Switch

1. Push *down* the lever to ON.

   Note: Some Power Link installations have *no* maintenance switch.

Install Door

1. Disengage wind stops at the hinges inside the door. Close the door.
2. Torque the four M5 screws on the door to **4.5 N·m (40 in-lb).**
   Tool: T25 Torx security driver
3. On the right side of the door, insert the bottom of the door bracket.
   Tilt in the top of the door bracket. Push down into position.
4. Torque the two M5 screws on the door bracket to **1.1 N·m (10 in-lb).**
   Tool: T25 Torx driver

Install Vinyl Signs, Trim, and Top Cover

a. top cover
b. interactive display trim (optional, not shown)
c. lower trim
d. vinyl sign
e. bottom cover

1. Position the bottom cover.
2. Reinstall four M5 screws. Torque to **2.8 N·m (25 in-lb).**
   Tool: T25 Torx driver
3. Push in the lower trim until it engages with the center and side clips.
4. Simultaneously insert both sides of the vinyl sign.
   Lower the vinyl sign behind the lower trim.
5. Reinstall the top cover (helmet).
   a. Lower the top cover straight down onto the station body. Do not tilt.
      Note: ChargePoint logo is in front.
   b. Front: Torque the two M4 screws to **1.1 N·m (10 in-lbs).**
      Tool: T25 Torx security driver
   c. Back: Torque the two M5 screws to **2.8 N·m (25 in-lb).**
      Tool: T25 Torx security driver

Continue to Charging Cable Instructions

Install the tool balancer.

Hang Charging Cable Onto Tool Balancer 6

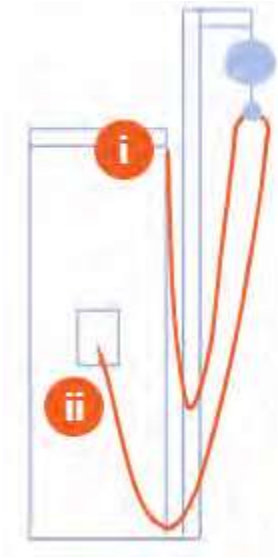
Identify if your site plans include a Cable Management Kit (CMK or kit) or a tool balancer.

Note: A CMK includes swingarms that attach directly to the Power Link station. A tool balancer is typically for medium-length cables that hang from a separate surface.

Install Tool Balancer

IMPORTANT: Do not follow these instructions if you have a tool balancer integrated into a Cable Management Kit (CMK) with swingarms. These instructions only apply to standalone tool balancers.

1. Install the tool balancer onto the structure and surface according to the site plans or requirements.
2. You must also meet these specifications:
   a. The measured length of cable between these points must match the specification for that charging cable size:
      i. length from the ball clamp (on the charging cable) to the housing (where the charging cable exits the upper side of the Power Link)
      ii. length from the ball clamp (on the charging cable) to the holster (pad where charging cable connector rests)
   b. Adjust the dial on the tool balancer to the prescribed tension setting.
   c. The horizontal distance of a post or other structure must be at least 0.5 m from that side of the Power Link.



WARNING: If you do not already have the tool balancer specifications for your specific charging cable and site configuration, contact ChargePoint Support (chargepoint.com/support).

Ensure that you implement the proper tool balancer specifications before your power on. If you fail to do so, the tool balancer is not properly installed and could cause death, personal injury, or property damage.

Charging Cable Size (total engineered length)	Distance (from structure to side of Power Link)	Length of Cable		Tension Setting
		From Ball Clamp to Housing	From Ball Clamp to Holster	
standard (6.5 m)				
medium (8.5 m)				

Note: Total engineered length of charging cable may include length inside the cabinet that is not visible.

Hang the Charging Cable

1. Position the stepladder so that you can reach the hanging point.
2. Attach the charging cable to the hanging point:
   a. Hold the charging cable on each side of the ball clamp.
   b. Align the anchor pin with the slot in the ball clamp.
   c. Push the ball clamp onto the pin.

3. Place each charging cable in the holster.
4. Untangle any twists.
    a. Check that the charging cables and swingarms operate smoothly by fully extending and retracting.
    b. If you find limited motion or retraction, contact ChargePoint at chargepoint.com/support.

5. Check tension setting on tool balancer to ensure it is still correct.

Verify and Adhere Ratings Label 7

Power Link

1. Locate the ratings label and serial number on the back right edge of the heat sink.

2. Verify the ratings listed on the site drawing.
3. Choose the correct ratings label from the label sheet (included).
4. Adhere the label to the indentation.

Power Block

Note: You should have already applied the ratings label when you connected the wiring *inside* the Power Block.

Power On 8

1. Ensure all doors, covers, vinyl signs, and all other parts have been correctly installed and the work is complete.
2. Turn on power at the same points that you turned it off.

   Note: If the site has a remote shunt trip switch, ensure that the switch is in the operating position.
3. Wait for self-diagnostics to run.
4. If you have not yet configured behavior (such as pricing, messaging, and additional options), do so after installation or service is complete.

IMPORTANT: Remember to complete the post-installation checklist.

Self-Diagnostics

After installation, service, or power outage, when you turn on power, the station runs the following self-diagnostics.

Note: The system may take several minutes to initiate. You may see messages intermittently until the system fully boots up.

Self-Diagnostic	After Installation	After Service or Power Outage
Electrical safety checks	✓	✓
Lighting checks	✓	✓
Display panel checks	✓	✓
Component operation checks	✓	✓
Network connectivity checks	✓	✓
Installation Wizard (for the installer to complete configuration and pinpoint the station on maps)	✓	–

IMPORTANT: Check the online dashboard at na.chargepoint.com to see if any error codes appear.

Activate and Connect to Network 9

To activate the charging station, you *must* set up the firmware (software Installation Wizard) and connect to the ChargePoint network (pinpoint the stations).

IMPORTANT: The charging station will *not* function until you complete these steps.

If you fail to set up the firmware (software), the job is incomplete. The site manager may ask you to return to complete the installation. Check with the site manager if in doubt.

Special Circumstances: Power Link With No Interactive Display

- Contact Support:

  If the Power Link has no interactive display, contact ChargePoint Support (chargepoint.com/support) to set up the firmware.

  ChargePoint Personnel: Run the "installshell" command line tool.
- Inform Site Manager:

  Ensure that the site manager is aware that the charging stations cannot be operated until the firmware is set up.

Tools, Materials, and Information

- smartphone, tablet, or laptop that can scan and read a QR code
- Internet connection
- your ChargePoint user name and password
- exact location, including parking space, where you installed the charging station(s)

Follow the Installation Wizard

CAUTION: Do not use *any* station until you have set up all firmware (software) on *all* charging stations.

Equipment damage can result from plugging in a vehicle that is running partial or incomplete firmware.

1. You have just powered on the system at the breaker panel.
2. After a few minutes, if the stations do not automatically start the setup sequence, contact ChargePoint Support (chargepoint.com/support).
    a. Identify the stations.
    b. Firmware up to date:

    Request confirmation that the charging stations are running the current firmware version. If not, ask the support technician to do this now.

    IMPORTANT: Ensure both paired charging stations have the exact same version of firmware before continuing. For example, two stations running 7.0.4.24 and 7.0.4.25 are not sufficiently synced.

3. Follow the Installation Wizard steps on the Power Linkinteractive display,

    Note: Your choice of language will not permanently affect the display language.
4. If the Installation Wizard finds any cover is not correctly installed or secured, you will see an error message (lower right of the display).

    DANGER: RISK OF SHOCK
    - *Before* any procedure, the technician must *disconnect the power.*
    - Follow 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.
    - Then *wait the required time* for *energy to dissipate* (see label on unit) before service. Do not remove signs or panels yet.
    - *Keep power off* until all cover panels are correctly reinstalled and the work is complete.

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

    a. To replace or reposition a part, follow the procedure in this *Installation Guide* or find more detail in the *Service Guide.*
5. Choose **New Installation.**

    Note: This applies to all stations you are installing. The other option, Replace Existing Station, is only for stations that have already run this sequence and will produce an error.
6. Confirm you have all tools, materials, and information to continue activation, and choose **Yes.**
7. Ethernet connectivity:
    - Pass

      If the Ethernet connection is detected, the Installation Wizard runs a connectivity check in the background and shows a message if all tests have succeeded.
    - Fail

      If the Ethernet test initially fails, it asks you to select Standalone or Paired configuration. Select **Paired.**

8. Resolve any errors.
    a. If you are unable to resolve them, try troubleshooting:
        - Ensure both stations are running the same (current) firmware version .
        - Ensure all covers, vinyl signs, and panels are fully installed.
        - Power off all stations and check the Ethernet and DC conductor connections.
        - Power Module Fault or timeout errors:
            - Power off all stations and check DC conductor and Power Module connections.
    b. If troubleshooting does not resolve the errors, contact ChargePoint Support (chargepoint.com/support).

Pinpoint the Location

IMPORTANT: Pinpointing sets up the location of a charging station for operation, service, and maintenance purposes. Location accuracy is critically important.

1. Locate the activation label.

    Your smartphone or other device has a scanning app:

    a. Use the camera, or open an app that can scan the QR code.
    b. Point the camera at the QR code on the activation sticker.
    c. Your device is automatically redirected to the installer pinpointing page. Check that the web page URL is m.chargepoint.com.
    d. Enter your ChargePoint installer login and password and **Log In.**
    e. The system automatically enters the MAC address and activation password. Check that these match those on the activation label. Choose **Next.**

    Your smartphone or other device does not have a scanning app:

    a. Go to m.chargepoint.com on your device.
    b. Enter your ChargePoint installer login and password and **Log In.**
    c. Enter the MAC address and activation password printed on the activation label. Choose **Next.**

    IMPORTANT: Verify the station serial number before proceeding. It cannot be changed after setup is complete.

2. Allow **Location Permission.** Your GPS coordinates are required to complete the pinpointing process.
3. Confirm that you are installing a new charging station and choose **Next.**
4. For **Make**, choose the manufacturer.

5. For **Model**, choose the model shown on the manufacturer type plate. Ensure the image of the equipment shown on the app matches the station at the site.
6. For **Station S/N**, enter the serial number shown on the manufacturer type plate and choose **Next.**
7. Begin to enter the address of the charging station. Then choose the address from the list of valid addresses and choose **Next.**
8. Drag the map to place the pin in the exact parking space for this charging station and choose **Next.**
9. Enter additional station location details, such as **Parking lot name, Building name, Floor label,** and **Parking restrictions**, if applicable. Choose **Next.**
10. Add **Helpful Information for Drivers**, if applicable.
11. Choose **Take Photo** to take an image of the newly labeled charging station and the parking space. Use your camera app to take and use a photo (follow on-screen guidance).
12. Choose **Next** to complete the process.

Test Charge 10

IMPORTANT: Express Plus has several configurations. All steps for all variants are included here. However, if a part or functionality is not present on your unit, you can skip or adjust that step as noted.

Before You Begin

- Complete service or installation.
- Ensure that you have reinstalled all doors, covers, vinyl signs, and other parts.
- Consult the post-service or post-installation checklist if you have not done so already.

Perform a Test Charge

1. Start and stop a charge from each of the following (to test each method):
    a. vehicle
    b. interactive display (if the charging station has a display)
    c. one of these:
        i. mobile app and RFID card, if applicable
        or
        ii. directly with the charging cable
2. During the test charge, check charging cable assemblies:
    a. Check that the charging cable connector rests properly in the station holster.
    b. Visually inspect the contacts on the charging cable connector.
    c. Check that the charging cable connects properly by latching to the vehicle charge port.
    d. Check that the button on the charging cable handle functions properly.
3. For units with an interactive display, check touch functionality (gesture recognition).
4. Evaluate test results.

- Troubleshoot

  If the unit does not power on or fails to start a charging session, follow the instructions in the *Service Guide* or *Installation Guide* to check that wiring is properly connected.

- Unresolved Errors

  If you see errors or faults on the Power Link interactive display or the ChargePoint Cloud Dashboard that you cannot resolve, contact ChargePoint (chargepoint.com/support).

  IMPORTANT: Check the ChargePoint Cloud Dashboard at na.chargepoint.com (or ca.chargepoint.com in Canada) to see if any alert codes appear.

- Success

  If you receive no errors and Power Link, Power Block, and Power Hub appear to operate correctly, you have completed the installation.

5. If you are a third-party service provider, complete the Post-Installation Checklist.

CAUTION: Contact ChargePoint (chargepoint.com/support) if you find any issues during the test charge, see a red alert on the ChargePoint Cloud Dashboard, or are unable to resolve an issue or question.

WARNING: Do not leave the site until the charging station is operating correctly.

If you are unable to resolve issues, ensure that the site manager is aware of the status, will not attempt to power on, and will ensure that all connected units remain off.

Recommended Post-Installation Checklist 11

To adhere to ChargePoint best practices, complete this checklist before you leave the site.

☐	I/we reconnected all ground/earth connections or confirmed they were connected, including those to ground lugs on pedestal and overhead installations.
☐	I/we confirmed that all connections have correct polarity and are installed on the correct bus.
☐	I/we inserted all service wiring into the terminal blocks and ensured that all electrical connections are clean and snug (not pinched or trapped).
☐	I/we cleaned and vacuumed all electrical enclosures to ensure they are clean and free of wire strands, metal shavings, and all other debris.
☐	I/we properly reinstalled and torqued all fasteners that were removed during service or installation.
☐	For stations with a cable management kit (CMK) or tool balancer, I/we checked that the charging cables extend and retract fully and operate smoothly.
☐	I/we removed any twists from and straightened all charging cables.
☐	I/we checked that no packaging or other foreign objects were inside any unit.
☐	I/we reinstalled all covers, doors, panels, and vinyl signs.
☐	I/we checked that the station is fully secured and does not rock or move.
☐	I/we checked that the Power Block is labeled with the panel and breaker information, and that the Power Link is labeled with the upstream Power Block or Power Hub, or I/we labeled them.
☐	I/we ensured the parking area is clean and free of all packaging, debris, and anything that could damage vehicle tires.
☐	I/we observed that the system completed self-diagnostics, including the network test, and started successfully. If the unit has a display, it showed the default message, and did not show the unit as unavailable. If no display, the lights indicated connectivity and did not indicate a fault.
☐	If possible, I/we completed a test charging session successfully without any faults or alerts.
☐	I/we prepared all local forms that are required.

Third-Party Service Providers

Services Performed

Description of Service Provided	
Location	
Unit	
Panel ID	
Breaker	

Contact Information

Service Provider	
Technician Name	
Service Company Name	
Address	
Contact Person	
Phone	

Site Owner/Customer	
Contact Person	
Business Name	
Site Address	
Phone	

Questions

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

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.

FCC Compliance Statement

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

Important: Changes or modifications to this product not authorized by ChargePoint, Inc., could affect the EMC compliance and revoke your authority to operate this product.

Exposure to Radio Frequency Energy: The radiated power output of the 802.11 b/g/n radio and cellular modem (optional) in this device is below the FCC radio frequency exposure limits for uncontrolled equipment. The antenna of this product, used under normal conditions, is at least 20 cm away from the body of the user. This device must not be co-located or operated with any other antenna or transmitter by the manufacturer, subject to the conditions of the FCC Grant.

ISED (formerly Industry Canada)

This device complies with the licence-exempt RSS standard(s) of Innovation, Science and Economic Development Canada (ISED). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux flux RSS exemptés de licence d'Innovation, Sciences et Développement économique Canada (ISDE). L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter.

Radiation Exposure Statement: This equipment complies with the IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Énoncé d'exposition aux rayonnements: Cet équipement est conforme aux limites d'exposition aux rayonnements ioniques RSS-102 Pour un environnement incontrôlé. Cet équipement doit être installé et utilisé avec un Distance minimale de 20 cm entre le radiateur et votre corps.

FCC/IC Compliance Labels

Visit chargepoint.com/labels

chargepoint.com/support

75-001428-01r4

Attachment 2 – ChargePoint Documentation

Part C - Concrete Mounting Template Instructions

FOR

COUNTY OF NEVADA
STATE OF CALIFORNIA

Electric Bus Charging Project
Nevada County Operations Center (NCOC) Phase-1

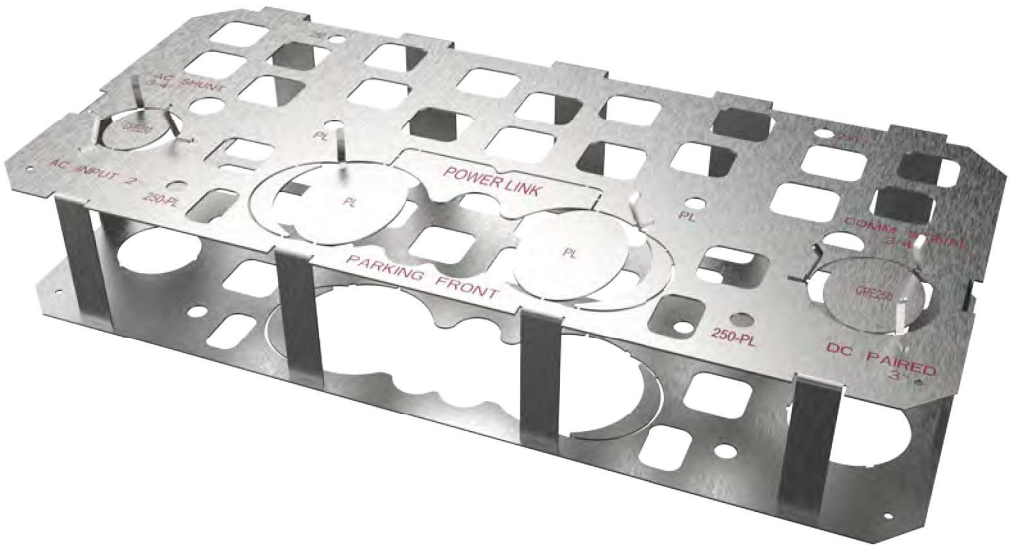
COUNTY PROJECT NO. 889830

California Air Resources Board (CARB) Grant No. G20-NS-001

A sub-grant of U.S. Environmental Protection Agency 2019 and 2020 Targeted Air Shed Grant Program #TA98T15301-0 with CARB

Concrete Mounting Template

for Express Plus Power Link and Express 250



IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

WARNING:

1. This guide contains important instructions you must follow to install, operate, and maintain the Express Plus DC fast-charging platform with Power Block model CPPB0001xxx and Power Link model CPPL0001xxx.
2. **Read and follow all warnings and instructions before servicing, installing, or 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.
3. **Only use licensed professionals certified by ChargePoint for installation and service, adhere to all national and local building codes and standards, and ensure compliance with local building and electrical codes and standards, climate conditions, safety standards, and all applicable codes and ordinances that may apply.** Before installing the ChargePoint unit, consult with a licensed contractor, such as a licensed electrician, and use a trained installation expert to ensure compliance. Inspect the charging station for proper installation before use.
4. **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.
5. **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.
6. **This charging station is not suitable for use in Class 1 hazardous locations, such as near flammable, explosive, or combustible vapors or gases.**
7. **Supervise children near this device.**
8. **Do not put fingers into the electric vehicle connector (plug).**
9. **Do not use this product if any cable is frayed, has broken insulation, or shows any other signs of damage.**
10. **Do not use this product if the enclosure/exterior/housing or the electric vehicle connector is broken, cracked, or open, or shows any other signs of damage.**
11. **Use only copper conductor wire rated for 90°C.**

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.**

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.com/guides.

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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

Contents

Introduction 1

Compatibility

This ChargePoint® Concrete Mounting Template (CMT) for Express Plus Power Link and Express 250 can be used interchangeably across these product lines to properly mount a DC dispenser ("charging station") to a concrete pad.

- Express 250 (standalone or paired configurations)
- Express Plus Power Link

Charging Stations Differ By Product

These product lines each include a DC fast-charging station, either as the main product (Express 250) or a unit (Power Link) within a charging system (Express Plus). The charging stations have charging cables that you can plug in to an electric vehicle to charge it with DC power.

Purpose of the Concrete Mounting Template

Most sites install and run service wiring underground to a concrete pad. Then the charging station is installed on that concrete pad.

The Concrete Mounting Template is the template for that concrete pad. This template is installed to align anchor bolts and conduit openings to ensure correct positioning when you subsequently install a charging station onto the concrete pad.

Concrete Mounting Template Kit Contents

The kit includes these parts:

- Concrete Mounting Template (CMT) metal template
- four threaded mounting bolts, 16 mm thread, 305 mm long, with plastic caps on one end
- eight M16 nuts
- eight M16 washers

Order a Template for Every Charging Station/Dispenser

You will need a Concrete Mounting Template for every charging station dispenser that you install.

WARNING: Risk of Death, Personal Injury, Property Damage, and Voided Warranty

- You are required to engage or be a ChargePoint certified installer, and required to use a ChargePoint-approved mounting method, such as this Concrete Mounting Template, to install the ChargePoint charging station.
- If you fail to use the approved mounting method, you risk the station tipping over, and that can cause death, personal injury, or property damage, and will void 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.

IMPORTANT: The number and location of conduits and wiring differ for each installation. Always refer to site drawings for conduit and wiring details.

Surface Conduit Entry Is Different (Order That Separately)

WARNING: Do not use this concrete mounting template (CMT) for surface conduit entry. That requires different components.

Before you begin, contact ChargePoint (chargepoint.com/guides) to obtain an approved Surface Conduit Entry kit for that station type.

Tools and Materials 2

- ChargePoint Concrete Mounting Template (CMT) for Express 250 and Express Plus Power Link (21-001413-05)
- two 24 mm socket wrenches
- pliers (to adjust the guide tabs on the template openings so that conduits can pass through)
- level
- digging tools appropriate for the site (shovel, spade, and similar tools)
- materials to prepare the form for pouring concrete
- concrete as specified by site drawings
- rebar as specified by site drawings
- conduit, ducting, and armored cable in the amounts and types specified by site drawings that comply with local code (conduit sizes and routing are provided in this guide)
- cut-resistant gloves
- protective eyewear

WARNING: Refer to the model-specific *Site Design Guide* and your specific site drawings for all construction requirements, pad specifications, and conductor specifications for your site.

3 Conduit and Anchor Bolt Configurations

Identify Model and Configuration

Conduit and Bolt Locations Vary

Use the appropriate conduits and anchor-bolt locations for your product, configuration, and model.

- **Express Plus**
  - Power Link

- **Express 250**
  - Standalone
  - Paired

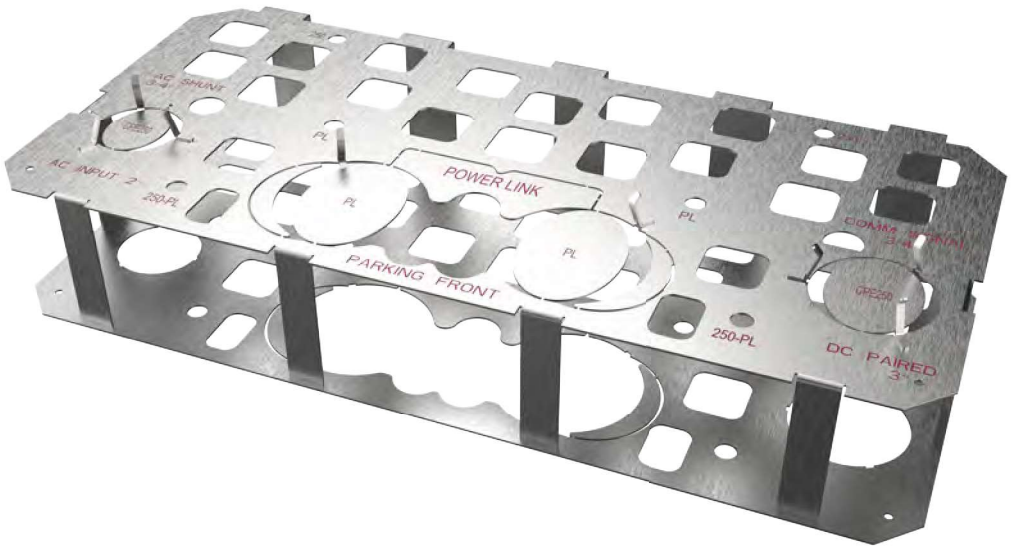
Wiring Varies

The number and type of wiring is typically different, so check the site drawings for your specific installation.

CAUTION: Do not use bell ends on conduits. Remove all bell ends. Bell ends can interfere with station placement.

Generic Legend

Shape of Opening	Part
smallest circle	four anchor bolts **IMPORTANT:** All stations require four anchor bolts.
square	concrete embedment and tie-off points (to maintain the position of the template while you pour the concrete and when it is curing)
small circle	conduit for wiring (48 V DC, Ethernet, both of those, or shunt trip)
medium circle on right side	conduit for AC input for Express 250
large circle on left side	conduit for DC sharing between paired Express 250
extra large circle (front center)	conduit for DC input for Power Link
crescent breakaway (off-center front)	(*anticipated late 2022*)
polygon (center middle)	(*anticipated late 2022*)
Parking Front	front edge nearest the parking lot

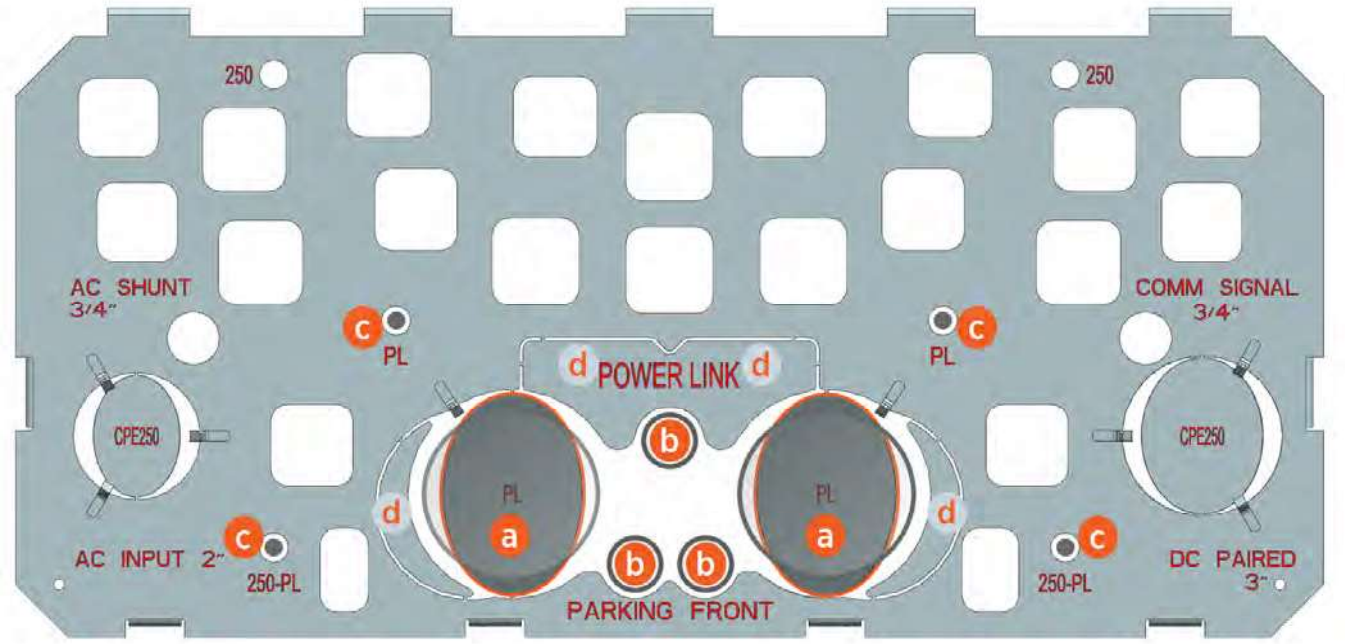


Express Plus Power Link

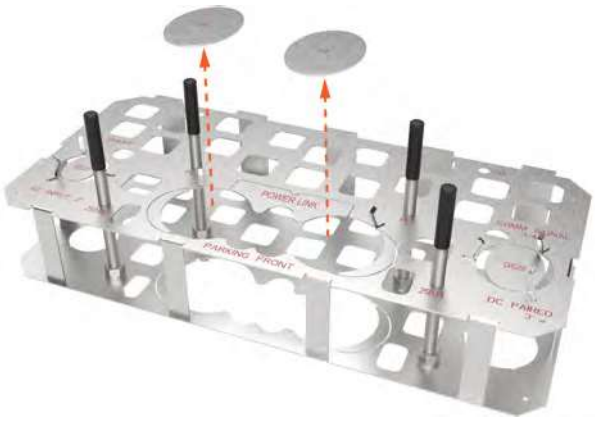
The Power Link receives DC input from an upstream component called a Power Block or Power Hub that centralizes AC to DC power conversion for multiple stations.

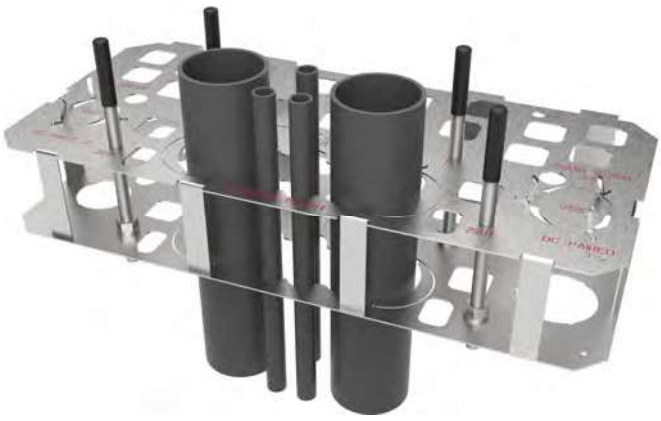
If the Quantity listed in the table is a range or option, check the site drawings.

Install four Power Link anchor bolts: two at the front-center edge of the template and two near the middle.



Route or Break Away for Conduit or Wiring	Description	Quantity
a. breakaway for DC input conductors	each up to 103 mm (4 in) trade size conduit	1 or 2
b. 48 V DC and Cat6 Shielded Twisted Pair (STP) Ethernet	21 mm (¾ in) trade size conduit **Note:** Check site drawings.	1–3
c. anchor bolts	M16	4
d. (*anticipated late 2022*)		





Note: Example only — check site drawings.

Express 250

Each Express 250 station requires AC power from the site's electrical panel. That AC conduit includes a ground conductor.

The standalone configuration uses only the conduit for AC input. Stations in a paired configuration also run a DC conduit and Ethernet between the paired stations.

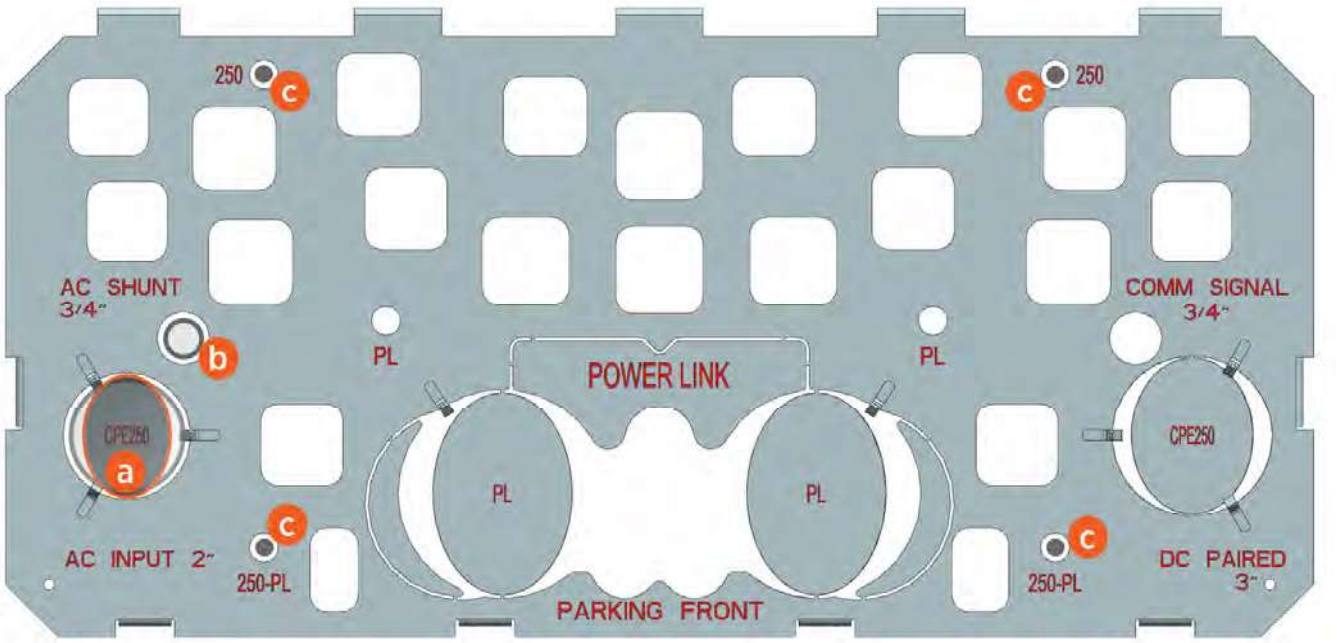
Optional shunt trip wiring can run from the station to the breaker panel. Check the site drawings for this.

Install four anchor bolts, with two at the front (nearest parking lot) and two at the rear of the template.

Note: Each Express 250 communicates with ChargePoint via a cellular network. No communication wiring is needed between the station and the building.

Standalone		Paired	
AC input conduit	1	AC input conduit	1
—		DC shared conduit	1
(optional) shunt trip wiring conduit	1	(optional) shunt trip wiring conduit	1
anchor bolts	4	anchor bolts	4
—		Ethernet conduit	1

Standalone Express 250 Configuration



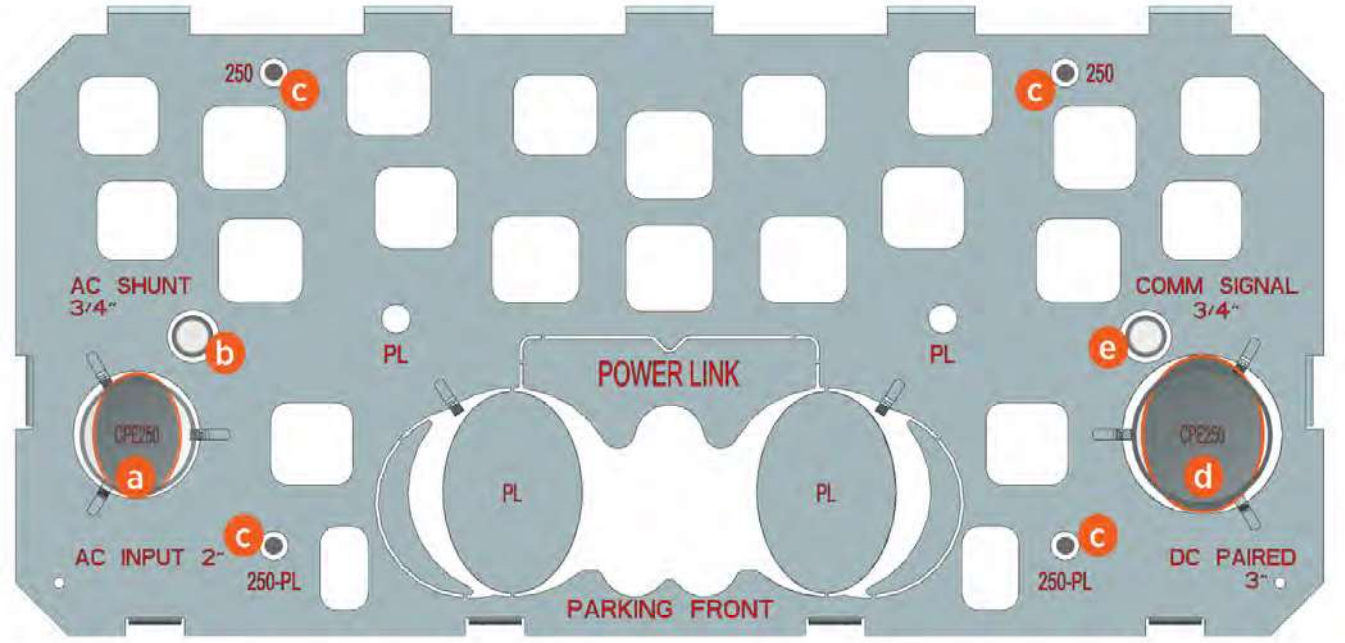
Route or Break Away for Conduit or Wiring	Description	Quantity
a. breakaway for AC conduit (left side) **Note:** AC conduit may include an AC disconnect switch in the circuit.	53 mm (2 in) trade size • runs to breaker panel	1
b. (optional) shunt trip conduit (left side) **Note:** Check site drawings.	21 mm (3/4 in) trade size • runs to breaker panel	
c. anchor bolts	M16	4

Paired Express 250 Configuration

If two Express 250 charging stations are "paired," they share DC power to allow faster (higher amperage) charging to a vehicle as needed.

For a paired configuration, follow the diagram. In addition to the Express 250 Standalone Configuration requirements, you must also run two additional conduits *between* the paired stations: an Ethernet wire for communication and a conduit for DC conductors.

Note: Each Express 250 communicates with ChargePoint via a cellular network. No communication wiring is needed between the station and the building.



Conduit or Wiring	Description	Quantity
a. breakaway for AC conduit (left side) **Note:** AC conduit may include an AC disconnect switch in the circuit.	53 mm (2 in) trade size • runs to breaker panel	1
b. (optional) shunt trip conduit (left side) **Note:** Check site drawings.	21 mm (3/4 in) trade size • runs to breaker panel	1
c. anchor bolts	M16	4
d. breakaway for DC conduit (right side)	78 mm (3 in) trade size • runs between the two paired stations	1
e. Ethernet conduit (right side)	21 mm (3/4 in) trade size • runs between the two paired stations	1


POWERLINK
PARKING FRONT
DC PAIRED


POWERLINK
PARKING FRONT

Plan a Future Upgrade 4

You can use the same Concrete Mounting Template (CMT) to install an Express 250 now, and in the future, reuse the same concrete pad for an Express Plus Power Link.

Note: Not applicable to all products and models.

Instructions

Install the template for future compatibility to upgrade later:

1. Install anchor bolts in the template at the locations required for the current station only.
2. Install conduits for *both* current AND future stations in the concrete now.

   Note: Future conduit stub-ups must rise at least 25 mm (1 in) above grade, but not higher than 33 mm (1.3 in), to prevent interference with the current station.
3. Do not pull future wires through until you upgrade the station.

Note About Future Upgrades:

In the future, when the station is swapped, installers can cut the old anchor bolts and stub-ups to grade level if required.

They will drill new anchor bolts and epoxy them in place using another ChargePoint upgrade template.

At the time of that future installation, installers will need to use an approved method to extend the conduit stub-ups and seal all gaps. Consult the *Installation Guide* and site drawings for that station for more detail.

For Example Only

Express 250 Standalone to Express Plus Power Link

This example shows the conduit and anchor bolt locations to install an Express 250 standalone that you will upgrade to an Express Plus Power Link in the future:

Station You Install Now	Preparation for Later Upgrade
a. Express 250 conduits b. Express 250 anchor bolts	c. Install Express Plus Power Link conduits now to upgrade later

WARNING: Upgrades Will Vary

This is a specific example. Other upgrade configurations will vary.

You must consult the specific configurations for your upgrade and include *both* current *and* future conduits.

Assemble the Concrete Mounting Template 5

CAUTION: The template has sharp edges. Wear cut-resistant gloves.

Before pouring concrete, install the anchor bolts, washers, and nuts into the template.

Install the anchor bolts in the locations indicated by the diagrams in this guide .

1. Hold a mounting bolt by its plastic cap.

   Ensure the plastic cap is pressed down fully onto the bolt. Leave the cap on to protect the threads.
   Note: The caps stay on until the day you install the charging station.
2. Insert the uncapped end through the hole in the *top* plate only.

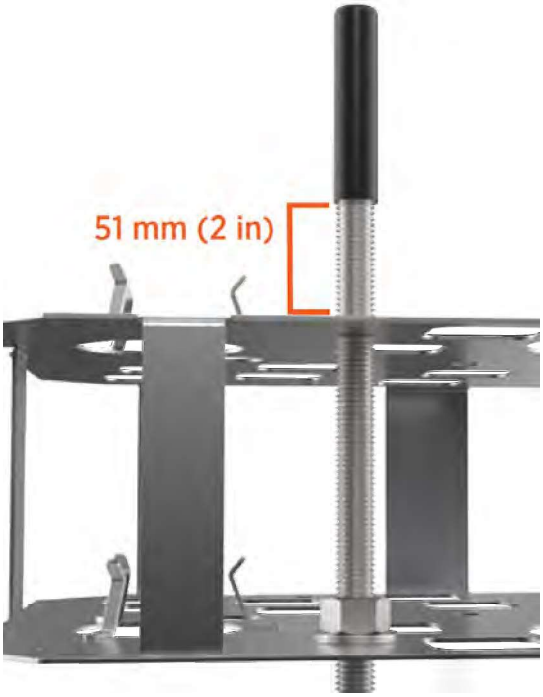
   Note: Do not pass through to the bottom yet.
3. Between the top and bottom plate, install a nut onto the bolt from below.

   Place a washer below the nut.

4. Place the nut and washer flush against the bottom plate.

5. Turn the bolt thread through the nut, washer, and bottom plate.

   Stop when the bottom of the plastic cap is **51 mm (2 in)** from the top plate.



6. Repeat the previous steps to partially install the remaining three corner bolts.

   Note: Do not insert any additional bolts. Only install the four anchor bolts at the required locations.

7. From under the bottom plate, install a washer and nut onto the end of each bolt (until washer and nut are flush with the bottom plate).

   Torque each nut to **5.6 N·m (50 in-lb).**

Install the Concrete Mounting Template 6

WARNING: Risk of Death, Personal Injury, Property Damage, and Voided Warranty

- You are required to engage or be a ChargePoint certified installer, and required to use a ChargePoint-approved mounting method, such as this Concrete Mounting Template, to install the ChargePoint charging station.
- If you fail to use the approved mounting method, you risk the station tipping over, and that can cause death, personal injury, or property damage, and will void 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.

IMPORTANT: The number and location of conduits and wiring differ for each installation. Always refer to site drawings for conduit and wiring details.

Trench, Lay Conduits, Form, and Rebar

1. Trench and excavate an opening to accommodate the wiring conduits and the concrete mounting pad.

   The opening must meet national and local codes and requirements and conform to site drawings.
2. Run conduits to each station as required by the site drawings.
3. Build the form and lay rebar for the foundation.

CAUTION: The conduits must be plumb and positioned properly to ensure that a charging station, which delivers high-voltage electricity, has a stable foundation.
The tolerance where the conduits enter the charging station is 2 mm (1/16 in).

Concrete Mounting Template

4. Align the template with the **PARKING FRONT** marking at the front of the station according to the site drawings.

IMPORTANT: Position the template with the guide tabs UP.
This will help guide the conduits.

5. Lower the template onto the conduit stub-ups until the top of the template is **51 mm (2 in)** below where the top of the concrete will be.

   IMPORTANT: The surface of the concrete must align with the bottom of the plastic caps. Do not force or bend the conduits.

6. Do not flex the template.

   Gently press the template down onto the conduits.

7. Ensure the conduits are plumb.
8. Check that the template is level from front to back and side to side.

   Tool: a level

9. Tie or shim the template to the rebar to prevent the template from moving when you pour the concrete.

   Do this only through the square openings.

   IMPORTANT: Before pouring concrete, you must secure the template and conduits in place.
   If the conduits rise or float out of position *when you are pouring* the concrete *or afterward when it is curing*, the concrete pad will not pass inspection.

   Only use the square openings in the template to secure its height. Do not use the round openings. If you do it can cause irregularities for, interfere, or obstruct installation.

Concrete and Check

10. Pour the concrete.

    IMPORTANT: Check that the concrete surface between the conduits remains completely level and free of irregularities.

11. Check that the concrete pad conforms to all requirements, specs, and site drawings.

Next Steps

Consult with your ChargePoint representative and construction manager to determine the next steps to prepare for site approvals.

You may need to review the Construction Signoff Form (chargepoint.com/guides).

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.

chargepoint.com/support

75-001436-01 r2

Attachment 2 – ChargePoint Documentation

Part D - Express Plus Specifications

FOR

COUNTY OF NEVADA
STATE OF CALIFORNIA

Electric Bus Charging Project
Nevada County Operations Center (NCOC) Phase-1

COUNTY PROJECT NO. 889830

California Air Resources Board (CARB) Grant No. G20-NS-001

A sub-grant of U.S. Environmental Protection Agency 2019 and 2020 Targeted Air Shed Grant Program #TA98T15301-0 with CARB

ChargePoint® Express Plus

A flexible DC Fast Charging platform that grows with you.

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Express Plus Specifications

Express Plus Power Module

Express Plus Power Module Output

Max Output Power	40 kW
Max Output Current	100 A
Power Conversion Efficiency	Up to 96%
Power Factor	0.99 at full load

Express Plus Power Module Specifications

Power Module Dimensions	430 mm (H) x 130 mm (W) x 760 mm (L) (1’5” x 5” x 2’6”)
Power Module Weight	45 kg (98.5 lb.)
Power Module Cooling	Liquid Cooled Technology
Harmonics	iTHD < 5% (Complies with IEEE 519)

Express Plus Power Block

Express Plus Power Block Input

Input Rating	3-phase, 400-480Y VAC, 310-260 A 50/60 Hz
Wiring	L1, L2, L3, Earth
Short Circuit Current Rating	65 kA

Express Plus Power Block Output

Max Output Power	200 kW
Output Voltage, Charging	200 V – 1000 V
Max Current per Output	200 A, 250 A, 300 A, 350 A, 500 A*
Number of Stations Served	One Power Block can serve up to 2 Power Link stations. Additional Power Blocks can be added to serve more stations or increase power output.
Max Power Modules per Power Block	5

* Subject to site configuration and installed stations

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Express Plus Power Block Specifications

Power Block Dimensions	2191 mm (H) x 988 mm (W) x 1039 mm (L) (7’3” x 3’3” x 3’5”)
Power Block Weight	455 kg (1000 lbs.) without Power Modules
Power Block Enclosure Rating	Type 3R, IP56

Express Plus Power Link

Express Plus Power Link Output

Max Output Power	200 kW, 250 kW, 300 kW, 350 kW with Power Blocks
Output Voltage, Charging	200 V – 1000 V
CCS1 Max Output Current**	Option 1: 200 A continuous with Power Blocks Option 2: 375 A peak, 350 A continuous with Power Blocks
CCS2 Max Output Current**	Option 1: 250 A continuous with Power Blocks Option 2: 375 A peak, 300 A continuous with Power Blocks
CHAdeMO Max Output Current**	Option 1: NA & EU: 200 A continuous with Power Blocks Option 2: NA: 140 A, EU: 125 A continuous with Power Blocks

**Availability may vary

Express Plus Power Link Specifications

Station Dimensions	2400mm (H) x 720mm (W) x 280mm (D) (7’11” x 2'5" x 11")
Station Footprint	965mm (W) x 635mm (D) (3'2" x 2'1") with Cable Management Kit
Station Weight	250 kg (550 lbs)
Number of Connectors	Up to 2 connectors per station
Supported Connector Types	CHAdeMO, CCS1 (SAE J1772™ Combo), CCS2 (IEC 61851-23)
Cable Length	Standard 4.5 m (15') with Cable Management Kit (CMK).* Optional lengths of 7.6 m (25’) and 10 m (33’) also available.
Station Enclosure Rating	Type 3R, IP56
Locking Holster	Yes
Mounting Type	Ground, Wall, Overhead

*Horizontal reach to typical vehicle charging port is 3.6 m (12 ft)

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Functional Interfaces

LCD Display	Full-color 200 mm (8”) LCD display (optional)
Authentication	RFID: ISO 15693, ISO 14443, NEMA EVSE 1.2-2015 (UR) Tap to Charge (NFC on Apple & Android) 15118-2 (EIM) Remote: Mobile and in vehicle (if supported by vehicle)

Connectivity Features

Local Area Network	2.4 GHz and 5 GHz WiFi (802.11 b/g/n)
Wide Area Network	4G LTE
Supported Communication Protocols	OCPP 2.0
Service and Maintenance	Remote system monitoring, diagnostic, and proactive maintenance

Safety and Operational Ratings

Vehicle Safety Communication	CHAdeMO – JEVS G104 over CAN, CCS1 – SAE J1772 over PLC and CCS2 — IEC 61851-23
Plug-In Detection	Power terminated per JEVS G104 (CHAdeMO), SAE J2931 (CCS1) and IEC 61851-23 (CCS2)
Safety Compliance	Complies with UL 2202, UL 2231-1, UL 2231-2, CSA 107.1 Shipped product will be UL and cUL listed. Complies with IEC 61851-1 and IEC 61851-23. Shipped product will be CE marked.
Surge Protection	Tested to IEC 61000-4-5, Level 5 (6 kV @ 3,000A). In geographic areas subject to frequent thunderstorms, supplemental surge protection at the service panel is recommended.
EMC Compliance	U.S and Canada: FCC 15 subpart A Class A; EU: EN55011, EN55022 and IEC61000-6-3 Class B

Generic Specifications

Operational Altitude	<3,000 m (<9,800 ft)
Operating Temperature	-40°C to 50°C (-40°F to 122°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)

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Operating Humidity	Up to 95% @ 50°C (122°F) non-condensing

Energy Management Features

Dynamic Power Management	Allows a fixed maximum power output per station or lets the system dynamically manage the power distribution per station.
Remote Energy Management	Manage output power via the ChargePoint Admin Portal, API, and Open ADR 2.0b VEN.

Hardware Ordering Information

The order codes below represent common product configurations. Other product options are available upon request. Please contact ChargePoint Sales for information and order codes. All SKU's displayed include standard cable management and mounting kit. Note, Power Link and Power Block current ratings must match. Eg. 250 A with 250A, 200 A with 200 A.

Description		Order Code
Commercial Models	Express Plus Power Block, 350 A or 300 A rated output	EXPP-PB1000-350A-PD or EXPP-PB1000-300A-PD
	Express Plus Power Link, North America version, 1x CCS1 350 A cable, 1x CHAdeMO 200 A cable, Pedestal, with display	EXPP-PL1021B-5A1S1-2A3S1
	Express Plus Power Link, Europe/UK version, 1x CCS2 300 A cable, 1x CHAdeMO 200 A cable, Pedestal, with display	EXPP-PL1121B-4A2S1-2A3S1
Fleet Models	Express Plus Power Block, 250 A or 200 A rated output	EXPP-PB1000-250A-PD or EXPP-PB1000-200A-PD
	Express Plus Power Link NA Version. 1x CCS1 200A 4.5m cable, Pedestal, No display.	EXPP-PL1011X-2A1S1
	Express Plus Power Link NA Version. Same as above but with 2x CCS1 Connectors	EXPP-PL1021X-2A1S1-2A1S1
	Express Plus Power Link Europe/UK Version. 1x CCS2 250A 4.5m cable, Pedestal, No display.	EXPP-PL1111X-3A2S1
	Express Plus Power Link Europe/UK Version. Same as above but with 2x CCS2	EXPP-PL1121X-3A2S1-3A2S1

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Hardware Ordering Information, Cont.

Description		Order Code
Other Connector Options	Cable connectors available include CCS1, CCS2, and/or CHAdeMO. Cables can be ordered with a single or a combination, as well as lengths and amperage depending on application.	Please contact ChargePoint Sales for assistance in ordering
Power Module	EXPP Power Module	EXPP-PM-40kW
Mounting & Template Options	Mounting kits and templates for various mounting are available	Please contact ChargePoint Sales for assistance in ordering
Buy America	Buy America (FTA & FHWA) options available upon request	Add -FTA or -FHWA to part numbers above

Software & Services Ordering Information

Description	Order Code
ChargePoint Enterprise Cloud Plan (Commercial) *Note: One token per vehicle. Station activation is included in this plan.*	CPCLD-ENTERPRISE-EXPP-n*
ChargePoint Enterprise Cloud Plan (Fleet) *Note: One token per vehicle. Station activation is included in this plan.*	CPCLD-FLEETENT-EXPP-n*
ChargePoint Assure® — Prepaid Assure Plan for an Express Plus Single Cable station.	EXPP-PL1000-SC-ASSURE-n*
ChargePoint Assure® — Prepaid Assure Plan for an Express Plus Dual Cable station.	EXPP-PL1000-DC-ASSURE-n*
ChargePoint Assure® — Prepaid Assure Plan for Express Plus Power Block.	EXPP-BLOCK-ASSURE-n*
Commissioning Service (Required per Power Block): includes on-site validation and inspection of electrical, mechanical, installation, wiring and civil parameters for the Express Plus Power Block.	EXPP-BLOCK-COMMISSIONING
Commissioning Service (Required per Power Link): includes on-site validation and inspection of electrical, mechanical, installation, wiring and civil parameters for the Express Plus Power Link.	EXPP-PL1000-COMMISSIONING

Note: All Express Plus Power Link stations require a cloud plan.

*Substitute *n* for desired years of service (1, 2, 3, 4 or 5 years). Includes parts and labor warranty, remote technical support, on-site repairs when needed, unlimited configuration changes, and reporting.

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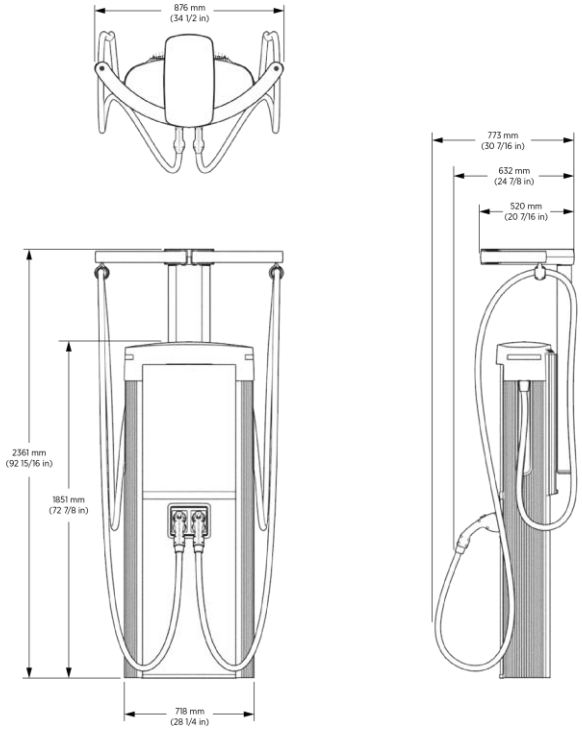
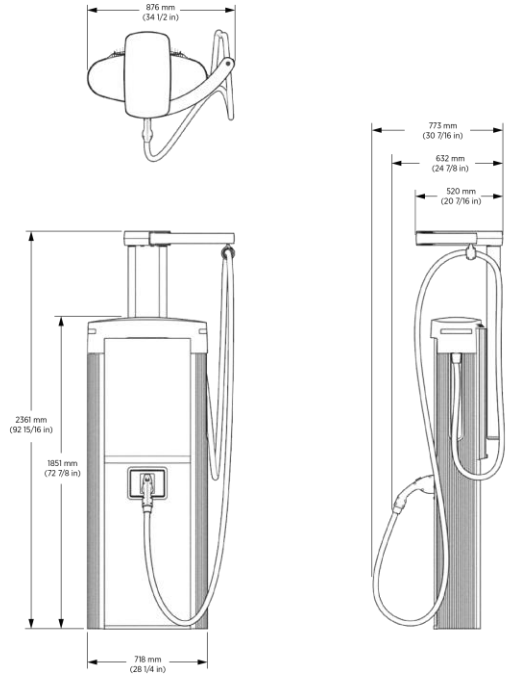
Architectural Drawings

Express Plus Power Link, No Display, Dual Connectors (Fleet Option Only)



Express Plus Power Link, No Display, Single Connector (Fleet Option Only)



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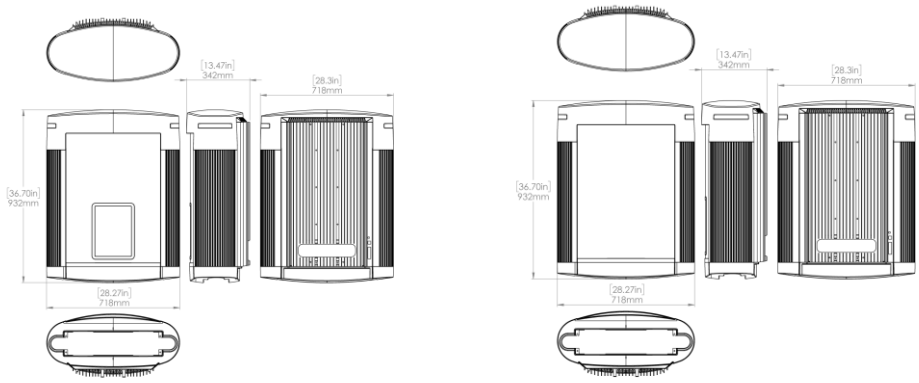
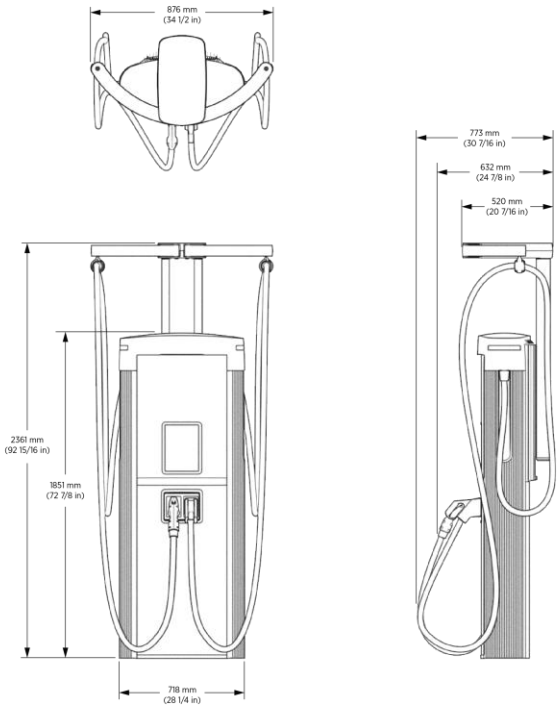
Express Plus Overhead Mounting Option with or without screen (Fleet Only)



Express Plus Power Link, Commercial Option with Screen



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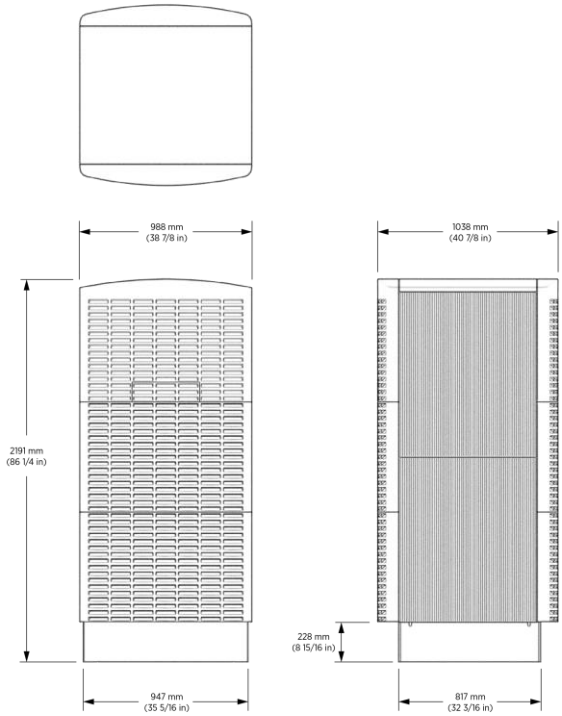
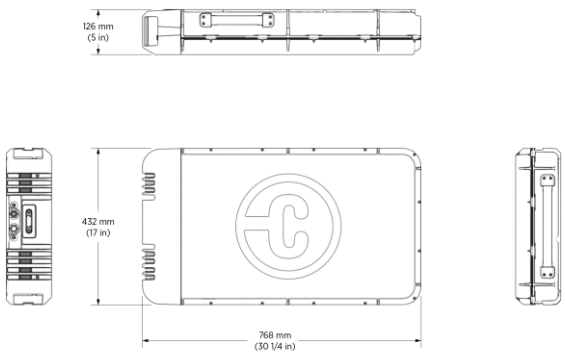
Express Plus Power Block



Express Plus Power Module



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* Listed by Underwriters Laboratories Inc.

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Attachment 2 – ChargePoint Documentation

Part E - Packing Slip for Delivered Equipment

FOR

COUNTY OF NEVADA
STATE OF CALIFORNIA

Electric Bus Charging Project
Nevada County Operations Center (NCOC) Phase-1

COUNTY PROJECT NO. 889830

California Air Resources Board (CARB) Grant No. G20-NS-001

A sub-grant of U.S. Environmental Protection Agency 2019 and 2020 Targeted Air Shed Grant Program #TA98T15301-0 with CARB

support@chargepoint.com for North America, Asia Pacific
support.eu@chargepoint.com for Europe

Packing Slip

#312322

Ship To

Sandy Balzer
County of Nevada
12350 La Barr Meadows Rd
Grass Valley CA 95949
United States

Bill To

Gillig LLC
25972 Eden Landing Road
Hayward CA 94545
United States

Date	Order Type	Order No	Customer PO No	Reference
1/27/2023	Sales Order	SO226637	8605513	Quote ID: Q-100517

Ship Via	Incoterms	Freight Code	Tracking Numbers	Ship To Contact
Expeditors Standard Freight	FCA	Prepaid and Add	BK06134462	Sandy Balzer (530) 265-1747 sandy.balzer@co.nevada.ca.us

Line	Order Code	Part Number	Serial Numbers	Ordered	Shipped	Units	Cartons
4.00	EXPP-PL1011X-2A1S1-FTA	00-EX0372-00		2	2	EA	
4.01	EXPP-PL1011X-FTA	99-006207-04-FT	224315205402 224315205398	2	2	EA	
4.02	EXPP-PL1000-CABLE-2A1S3-FTA	99-006301-05-FT		2	2	EA	
4.03	EXPP-PL1000-CABLE-CAP-F-FTA	99-006311-03-FT		2	2	EA	
4.04	EXPP-PL1010-CMK-F	99-006310-02		2	2	EA	
5.00	EXPP-PB1000-200A-PD-FTA	00-EX0369-00		1	1	EA	
5.01	EXPP-BLOCK-FUSEK-200A	99-004402-01		1	1	EA	
5.02	EXPP-PB1000-MAINK-FTA	99-004409-04-FT	225115106480	1	1	EA	
5.03	EXPP-PB1000-PANELK-FTA	99-004410-03-FT		1	1	EA	
5.04	EXPP-PB1000-PDK	99-004408-03		1	1	EA	
6.00	EXPP-PM-40KW-FTA	00-EX0371-00		5	5	EA	
6.01	EXPP-PM-40KW, FTA	99-004701-07-FT	230215600006 230215600037 230215600040 230215600039 230215600036	5	5	EA	

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Packing Slip

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Notes

Total Cartons: 0

Parts on this order may ship from multiple warehouse locations..