EverCharge

240kW Direct Current Fast Charging System

Power Cabinet with Air-Cooled Dispenser



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1 - Safety and Liability

DO NOT DISCARD THE FOLLOWING IMPORTANT SAFETY INSTRUCTIONS

This manual contains important instructions that must be followed during the installation of an EverCharge 240kW Direct Current Fast Charging System (known throughout this document as the 240kW DCFC), consisting of Cabinet and Dispenser components.

1.1 - Grounding Instructions

The EverCharge 240kW DCFC must be connected to an equipment-grounding conductor, must be run with circuit conductors and connected to the equipment grounding terminal / lead on the Electric Vehicle Supply Equipment (EVSE). Connections to the EVSE shall comply with all applicable codes and ordinances.

1.2 - Handling and Storage Guidelines

Handling Instructions:

- In the process of unloading and handling, the forklift should be selected reasonably according to size and weight of the goods in order to avoid the packaging containers from being dropped.
- In order to prevent the safety of placing and unpacking products affected by tilt and uneven ground, please choose a flat ground when unloading.
- If the containers need to be temporarily stored after unloading, it is recommended to keep sufficient space between each pallet to avoid damages to the packagings or pallets during the second transfer.

Storage Instructions:

- Due to the complexity of the environment and climate of project sites, it is required to store and stack the goods with a single layer after unloading in order to ensure the safe storage of the goods on site.
- The goods should be stored in a complete outer packaging.
- The storage area should be protected, keeping the pallets and packaging containers from damp, direct sunlight, rain (waterproof) measures, and all other environmental hazards. The indoor storage temperature should be -40°F to 185°F (-40°C to +85°C).
- The grounds of the storage areas should be kept dry and leveled.
- Do not stack other items on the containers.

Important Notes:

⚠ **Title and risk of loss for the product transfer to you upon delivery. You are responsible for any damage to the product occurring after delivery.**

1.3 - 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 this document, may cause harmful interference with radio communications. Operation of this equipment in a residential area could cause 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 EverCharge Inc. could affect EMC compliance and revoke your authority to operate this product.

1.4 - Safety and Compliance

This document provides instructions to install the EverCharge 240kW DCFC and should not be used for any other product. Before installing the EverCharge 240kW DCFC, you should review this manual carefully and consult with a licensed contractor, licensed electrician, and trained installation expert to ensure compliance with local building practices, climate conditions, safety standards, and all applicable codes and ordinances. The EverCharge 240kW DCFC should be installed only by a licensed contractor and a licensed electrician and in accordance with all local and national codes and standards. The EverCharge 240kW DCFC should be inspected by a qualified installer prior to the initial use. Under no circumstances will compliance with the information in this manual relieve the user of his/her responsibility to comply with all applicable codes or safety standards. This document describes the most commonly-used installation and mounting scenarios. If situations arise in which it is not possible to perform an installation following the procedures provided in this document, contact EverCharge, Inc. EverCharge, Inc. is not responsible for any damages that may occur resulting from custom installations that are not described in this document.

1.5 - Safety Requirements for Installation Personnel

- **Warning**: You must comply with the installation site's established safety requirements.
- **Warning**: Pay attention to warning and safety signs posted in and around the work site.
- **Warning**: Wear proper head protection, closed toed shoes, and Personal Protective Equipment while installing the EverCharge 240kW DCFC.
- **Warning**: When testing the EverCharge 240kW DCFC, wear proper Personal Protective Equipment and an Arc Suit, including an Arc-rated face shield, arc-rated coveralls, safety glasses, ear canal inserts, and rubber insulated gloves.
- **Warning**: If working at an elevated height, wear proper fall protection, head protection, and closed-toed non-slip shoes.
- **Warning**: If working at an elevated height, properly secure work tools.
- **Warning**: If in the presence of heavy dust or paint fumes, wear a respirator.
- **Warning**: Do not stand under a forklift, hoist zone, or other such area where personnel are working at height.
- **Warning**: When possible, keep a safe distance from mechanical and electrical equipment to reduce potential exposure to mechanical or electrical hazards.
- **Warning**: When possible, avoid unnecessary contact with mechanical and electrical equipment to prevent undue damage to said equipment.
- **Warning**: Only properly trained personnel should use power tools.
- **Warning**: When using power tools, wear protective shoes, gloves, and other equipment.
- **Warning**: Ensure all power tools are properly grounded or connected to a neutral line.
- **Warning**: Be sure to keep all electrical equipment and power supplies intact. If electrical components are damaged, they must be fixed before work can proceed.
- **Warning**: Prevent falls: Pay attention when moving around open pits or elevated work zones.
- **Warning**: Pay attention to ground conditions when walking to prevent injuries from contact with construction debris (nails, steel bars, etc.).

1.6 - Accuracy

Reasonable effort was made to ensure that the specifications and other information in this manual are accurate and complete at the time of its publication. However, the specifications and other information in this manual are subject to change at any time without prior notice.

1.7 - Disclaimer

The EverCharge products are provided "AS IS," and EverCharge, Inc. and its distributors expressly disclaim all implied warranties, including any warranty of design, merchantability, fitness for a particular purpose, and non-infringement, to the maximum extent permitted by law.

1.8 - Limitation of Liability

In no event shall EverCharge, Inc. or its authorized distributors be liable for any indirect, incidental, special, punitive, or consequential damages, including without limitation, lost profits, lost data, loss of use, cost of cover, or loss or damage to the EverCharge Charging station, arising out of or relating to the use or inability to use this manual, even if EverCharge, Inc. or its authorized distributors have been advised of the possibility of such damages.

1.9 - Copyright Notice

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2 - General

2.1 - Purpose of Document

This document aims to help guide installation personnel to successfully complete the electrical and mechanical installation of the EverCharge 240KW CABINET (DC Fast Charger).

2.2 - Product Scope

This manual applies to the following products and part numbers:

- 240kW Cabinet - E800-1017
- 240kW Dispenser - E800-1018

This manual is intended for use by the personnel responsible for installing this charger.

2.3 - Definitions of Related Warning Symbols

Table 1 - Definition of Warning Symbols	
Symbol	**Meaning**
	**The "Electrical Hazard" symbol indicates Danger.** Failure to follow the procedures, practices, and/or proper implementation steps as specified in this manual may cause **injuries or death**. Only perform the operations marked by the "Electrical Hazard" symbol when the associated pre-conditions are fully understood and satisfied.
	**The "Caution" symbol indicates Warning.** Failure to follow the procedures, practices, and/or proper implementation steps as specified in this manual may cause **product damage**. Only perform the operations marked by the "Caution" symbol when the associated pre-conditions are fully understood and satisfied.
	**The "Tips" symbol indicates operational tips or useful information.** This symbol does not indicate information about warnings for dangerous or harmful functions.
	**The "Waste Disposal" symbol indicates electronic and electrical waste.** This logo is located on the product, the packaging, or in the instruction manual to indicate that electrical and electronic equipment (and its accessories) should be disposed of separately from ordinary household waste. If marked as such, the material should be reused or recycled.

3 - Tools and Materials

3.1 - Installation Tools

It is recommended to have the following tools on hand for this installation process:

- Large Diameter Cable Cutter
- Large Cable Strippers
- RJ45 Crimping Tool
- Multimeter
- Ohmmeter
- Heat Gun
- Hammer
- Hammer Drill
- Tongue-and-Groove Pliers
- Tape Measure
- Metric Socket Set
- Metric Box End Wrench Set
- #1 & #2 PH Screwdriver
- Torx Security Bits
- Allen Wrench Set
- Level
- Utility Knife
- Pen / Marker
- Crane / Forklift

Use the following protective equipment on hand when testing this device:

- Arc-rated face shield
- Safety Glasses
- Ear Canal Inserts
- Arc-rated Coveralls
- Rubber Insulated Gloves
- Close-toed Safety Shoes

⚠ Note: The above tools shall be selected based on the actual situations on site.

3.2 - Construction Materials

3.2.1 - CABLE TERMINALS

It is necessary to have the following cable types on hand. For relevant dimensions, refer to the Copper Cable Terminal Specifications (Appendix E) (unless otherwise specified).

1) 600 Kcmil cable
   Corresponding Terminal: Burndy YALNT38 copper terminal lug
2) 4/0 AWG cable
   Corresponding Terminal: Burndy YA28 copper terminal lug
3) 3AWG cable
   Corresponding Terminal: Burndy YA3CTC38 copper terminal lug (Refer to Appendix E)
4) RJ45 connector for CAT6e network cable
   ⚠ **Important**: If the distance between the Cabinet and Dispenser is over 328 ft (100 m), use Optical Fiber (refer to *Section 5.3.5: Communications Wiring*)

3.2.2 - POWER CABLE CHECKLIST

240 kW Cabinet + 2* Dual CCS1 (200A) Dispensers

The following is a checklist of cable models recommended for use with the EverCharge 1* 240 kW Cabinet + 2* Dual CCS1 (200A) Dispensers.

Table 2 - Cable Checklist for 240 kW Cabinet + 2* Dual CCS1 (200A) Dispensers

From	To	Cable Model	QTY	Notes
Power Distribution Box	Cabinet	600 Kcmil (copper) Rated voltage: 0.6 kV	6	L1, L2, & L3 Dual cable for each phase
Power Distribution Box	Cabinet	2AWG (copper) Rated voltage: 0.6 kV	1	PE
Power Distribution Box	Cabinet	2AWG (copper) Rated Voltage: 0.6 kV	1	Neutral Line (Optional)
Cabinet	Dispenser #1	600 Kcmil (copper) Rated Voltage: 1 kV	4	2 for CCS1-A (DC+& DC-) 2 for CCS1-B (DC+& DC-)
Cabinet	Dispenser #2	600 Kcmil (copper) Rated Voltage: 1 kV	4	2 for CCS1-A (DC+& DC-) 2 for CCS1-B (DC+& DC-)
Cabinet	Dispensers #1 & #2	2AWG (copper) Rated Voltage: 0.6 kV	2	PE
Cabinet	Dispensers #1 & #2	2 * 14AWG	2	AC480V Power Cable L+L
Cabinet	Dispensers #1 & #2	Network Cable (CAT6e)	2	If communication distance ‹100m
Cabinet	Dispensers #1 & #2	Optical fiber SC-SC (with connector YFOC-M-SC, SC Multi-mode 50/125um connector)	2	Armored multi-mode double core If communication distance ›100m

240 kW Cabinet + 1* Dual CCS1 (200A) Dispenser

If only 1 Dispenser is being installed with the 240 kW Cabinet, Table 3 contains a checklist of cables recommended for use with the EverCharge 1* 240 kW Cabinet + 1* Dual CCS1 (200A) Dispenser.

Table 3 - Cable Checklist for 240 kW Cabinet + 1* Dual CCS1 (200A) Dispenser

From	To	Cable Model	QTY	Notes
Power Distribution Box	Cabinet	600 Kcmil (copper) Rated voltage: 0.6 kV	6	L1, L2, & L3 Dual cable for each phase
Power Distribution Box	Cabinet	2AWG (copper) Rated voltage: 0.6 kV	1	PE
Power Distribution Box	Cabinet	2AWG (copper) Rated Voltage: 0.6 kV	1	Neutral Line (Optional)
Cabinet	Dispenser	600 Kcmil (copper) Rated Voltage: 1 kV	4	2 for CCS1-A (DC+& DC-) 2 for CCS1-B (DC+& DC-)
Cabinet	Dispenser	2AWG (copper) Rated Voltage: 0.6 kV	1	PE
Cabinet	Dispenser	2 * 14AWG	1	AC480V Power Cable L+L
Cabinet	Dispenser	Network Cable (CAT6e)	1	If Communication distance <100m
Cabinet	Dispenser	Optical fiber SC-SC (with connector YFOC-M-SC, SC Multi-mode 50/125um connector)	1	Armored multi-mode double core If communication distance ≥ 100m

⚠ **Important**: If a different amperage or configuration of Cabinets and Dispensers are being installed, please reach out to EverCharge Support for relevant instructions. EverCharge Customer Support is available at *support@evercharge.com* or *888-342-7383.*

4 - Site Preparation

Keep the following in mind when selecting an installation site for the EverCharge 240kW DCFC system.

1) Ensure that the space and the airflow around the Cabinet meets the requirements laid out in Section 4.3 - Equipment Spacing Requirements.

2) When placing the Dispenser, consider the length of the CCS charging cables to make sure their length is sufficient for connecting to different makes and models of electric vehicles. The length of the charging cables is 16.4 ft (5 m).
   ⚠ **Note:** Electric vehicles can have charging ports on both the front or rear of the vehicle (either passenger or driver side).

3) Ensure the overall site (especially the Dispenser placement) complies with applicable usability standards, such as Americans With Disabilities Act (ADA). More details about ADA Compliance can be found in the "Height of User-Operable Elements" section of Appendix F: Technical Data.

4) Ensure the concrete foundations for both the Cabinet and Dispenser have been sized appropriately. See Section 4.2 - Concrete Foundation Requirements for relevant drawings and guidelines.

5) Confirm site power availability and power distribution infrastructure.
   a) Details on AC and DC cable sizes can be found in Section 4.1.4 - AC and DC Wire Sizing.

6) Plan to use the correct type of communications wiring depending on the planned distance between the Cabinet and Dispensers. See Section 5.4.3 - Communications Wiring for more information.
   a) The ethernet cable and 480V Auxiliary power connection from the Cabinet to Dispenser must be installed in a separated raceway enclosure.
   b) For installations where the distance between CABINET and DISPENSER is less than 328 ft (100 m) the use of CAT6e ethernet cable is recommended.
   c) If you have a site with greater distances, utilize optical fiber and please contact EverCharge for installation guidance.

7) Verify that there is enough excess cable at both ends of the Cabinet and Dispenser to properly terminate the connections without inducing stress on the equipment terminals.

4.1 - Site Distribution and Wiring Requirements

4.1.1 - HANDOVER OF CONSTRUCTION DRAWINGS

Before beginning construction, the installation contractor must verify whether the installation plans provided meet the minimum installation requirements specified in this manual. It is the responsibility of the project engineer to ensure that the plan details comply with all electrical, mechanical, and foundation guidelines provided in this guide, in addition to all local jurisdictional requirements related to building, mechanical and electrical codes, before installing the EverCharge 240kW DCFC.

4.1.2 - DISTRIBUTION INFRASTRUCTURE CAPACITY REQUIREMENTS

When the EverCharge 240KW DCFC operates at full power (240kW DC output), the maximum AC input current of the CABINET is 342A at 480V (3PH AC), and the capacity of the site transformer supplying the system should be 260kVA or greater.

4.1.3 - GROUNDING/INSULATION RESISTANCE REQUIREMENTS

Check the Grounding Resistance test report to ensure the grounding grid's resistance value is less than or equal to 4Ω.

Check the Insulation Resistance test report to ensure that the cable's insulation resistance value is greater than or equal to 10MΩ.

4.1.4 - AC AND DC WIRE SIZING

Table 4 outlines the minimum conductor size required for all of the connections inside both the Cabinet and Dispenser. A qualified engineer should review all wiring to ensure conductors are sized according to relevant local electrical codes and standards, as well as site conditions.

Additionally, the size of the ring terminals for each piece of equipment and suitable compression lugs (with part numbers) are provided.

Table 4 - Minimum Conductor Size Required for Electrical Connections

Conductor Name	**Minimum Conductor Size**	**Stud Size**	**Recommended Part Number** (or suitable equivalent)
480V - Phase B/O/Y	600 Kcmil / phase	½ in	Burndy YA36N
480V - Neutral	600 Kcmil	⅜ in	Burndy YALNT38
480V - Parallel Phase B/O/Y	3/0 AWG x 2 / phase	½ in	Burndy YA27
480V - Parallel Neutral	3/0 AWG x 2	⅜ in	Burndy YA27L4BOX
Cabinet DC Outputs	4/0 AWG	⅜ in	Burndy YA28
Dispenser DC Input	4/0 AWG	½ in	Burndy YA28
Cabinet Grounding Conductor	3 AWG	⅜ in	Burndy YA3CTC38
Dispenser Grounding Conductor	6 AWG	¼ in or 5/16 in	Burndy YA6CLBOX, YA6CL3BOX

Notes:

- All conductors above are assumed to be copper unless otherwise noted.
- Compression terminals are to be heavy duty type, electro-tin plated and UL listed for the application.
- All lug sizing assumes standard strand count wire (such as THWN, XHHW, etc). The usage of flexible cable such as MTW, Type G, or similar, requires appropriately sized lugs.

4.1.5 - BUSBAR SPECS

Table 5 - Bus Specs for 240 kW DCFC System				
Usage	**Description**	**Minimum Conductor Size**	**Stud Size**	**Recommended Part Number** (or suitable electrical/mechanical equivalent)
Cabinet Ground Output to Dispenser Grounding Bus	Two Conductor Aluminum Set Screw Connector	6 AWG	⅜ in	Burndy K2A29U

4.1.6 - AUXILIARY POWER WIRING GUIDELINES

Table 6 - Auxiliary Power Wiring Guidelines		
Conductor Name	**Minimum Conductor Size**	**Termination**
Cabinet to Dispenser 480V - Phase A & B	2 x 14 AWG 600V	Dispenser: Push-in terminal block Cabinet: QF4 or QF5 breaker

Notes:

- All conductors above are assumed to be copper unless otherwise noted.
- When using fine stranded conductors, a suitably sized ferrule for the wire gauge must be used on the ends of the conductors.

4.1.7 - VOLTAGE DROP

The maximum recommended voltage drop between system components at their design load is 3.5% or less. Failure to adhere to this design requirement could result in substandard performance of the system.

4.2 - Concrete Foundation Requirements

Pour a fresh concrete foundation before installing the charger. Tables 7 & 8 contain the minimum foundation requirements for both the Cabinet and Dispenser, respectively, but the specific size can be adjusted for specific customer needs or site conditions.

The pad must be level and flat (within ± ¼ in / 6 mm variation across the surface), with a minimum strength of 4000 PSI (or greater). The concrete pad must support the full size and weight of the unit while complying with all applicable local building codes.

⚠ **Important**: Verify the concrete pad is cured to its required strength according to manufacturer's instructions before mounting either the Cabinet or the Dispenser.

Table 7 - Power Cabinet - Concrete Pad Minimum Requirements	
Dimension	**Value**
Length	49 ¼ in (1250 mm)
Width	37 ⅜ in (950 mm)
Overall Depth	23 ⅝ in (600 mm)
Height Below Finished Grade	15 ¾ in (400 mm)
Height Above FInished Grade	7 ⅞ in (200 mm)

Table 8 - Dispenser - Concrete Pad Minimum Requirements	
Dimension	**Value**
Length	37 ⅜ in (950 mm)
Width	23 ⅝ in (600 mm)
Overall Depth	23 ⅝ in (600 mm)
Height Below Finished Grade	15 ¾ in (400 mm)
Height Above FInished Grade	7 ⅞ in (200 mm)

The following requirements must also be met:

1) Outlet holes must be reserved on the foundation.
2) The foundation should be checked to be level to within ± ¼ in (6 mm) across the total surface.
3) (4x) ½" x 6 in anchor bolts (M12 x 150 mm) (not included) shall be used to anchor the units to the concrete pad.
    a) The bolts must be pre-embedded into the concrete pad in advance according to the drawing positioning, with between 1 - 1 ½" (25 - 40 mm) of thread exposed from the finished surface of the concrete.
4) If installing the charger in an area with wet soil, consider using impermeable concrete.

The top view of the concrete foundation for the 240 kW Cabinet is shown in Figure 1. The front and side installation views for the Power Cabinet are shown in FIgure 2.

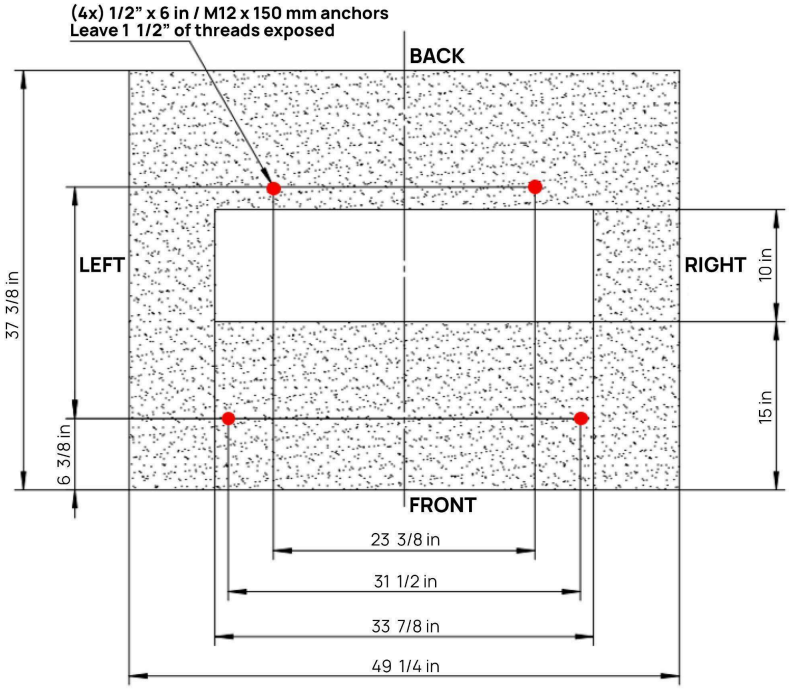


Figure 1 - Top View of Concrete Foundation of 240kW Power Cabinet

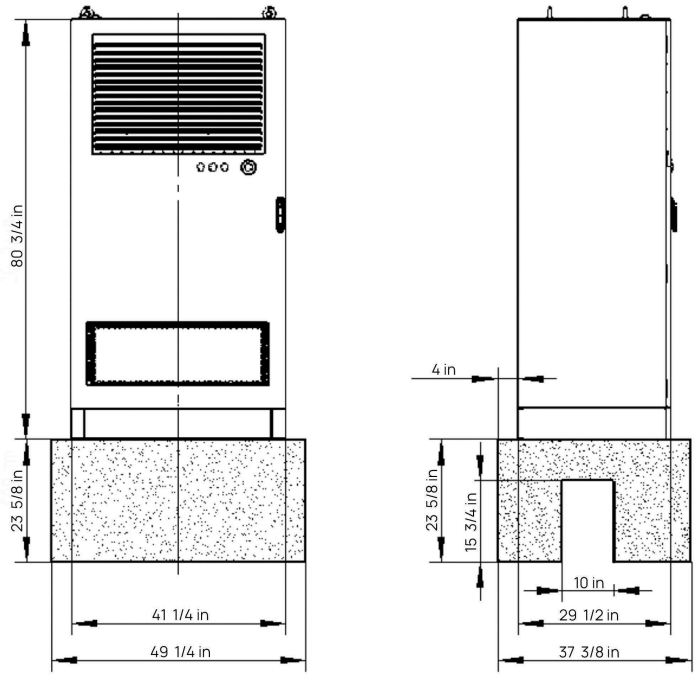


Figure 2 - Installation Views of 240kW Power Cabinet

The top view of the concrete foundation for the Dispenser is shown in Figure 3. The front and side installation views for the Dispenser are shown in FIgure 4.

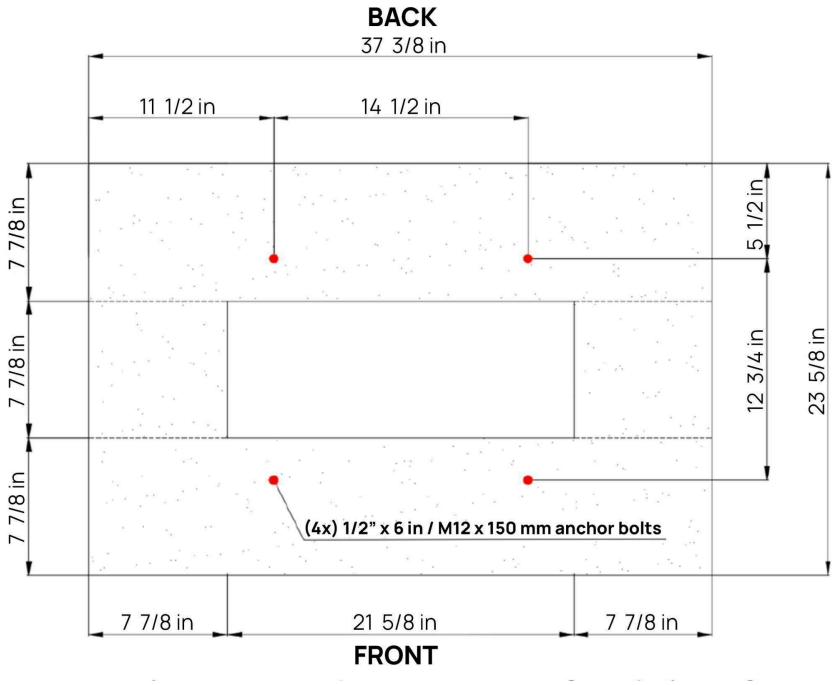


Figure 3 - Top View of Concrete Foundation for Dispenser

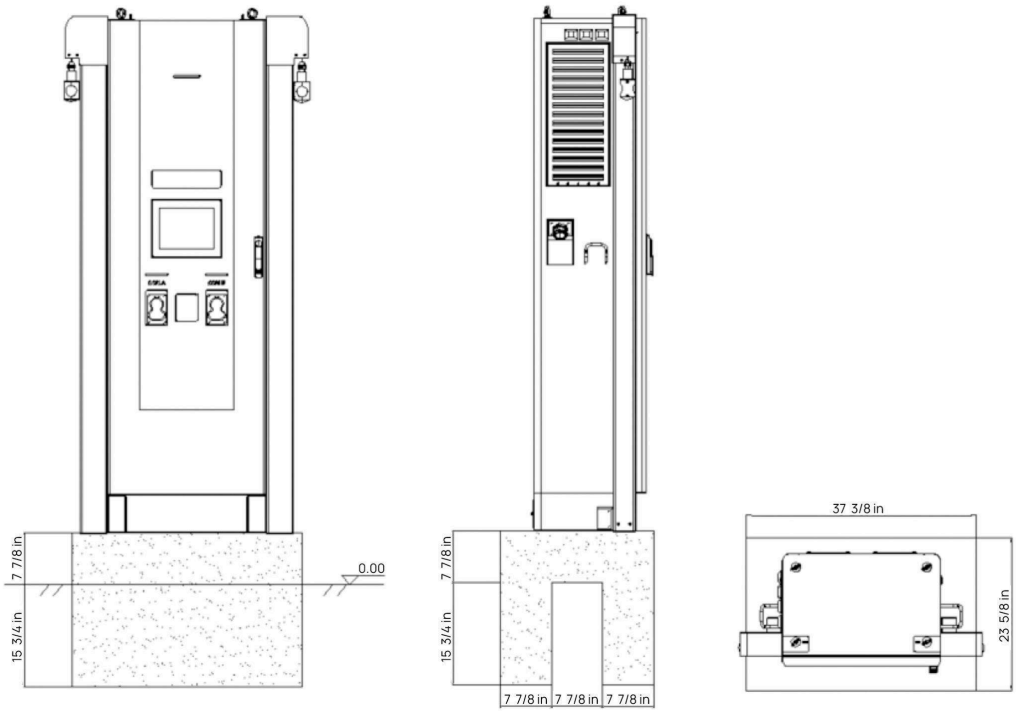


Figure 4 - Installation Views of Dispenser

4.3 - Equipment Spacing Requirements

4.3.1 - INSPECTION DISTANCE REQUIREMENTS

Proper access and working clearance per the NEC, local AHJ or utility requirements, as well as those outlined in this document shall be provided for both the Cabinet and Dispenser. In all cases, the clearances called out in this document shall be treated as the minimum allowable.

The minimum inspection distance requirements for the 240kW Power Cabinet are shown in Figure 5. The minimum inspection distance requirements for the Dispenser are shown below in Figure 6.

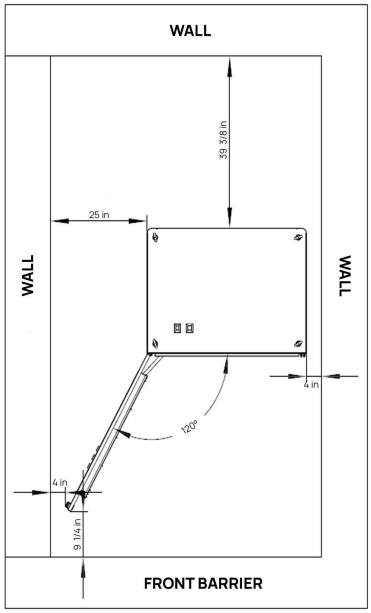


Figure 5 - Minimum Inspection Distance Requirements for 240kW Power Cabinet

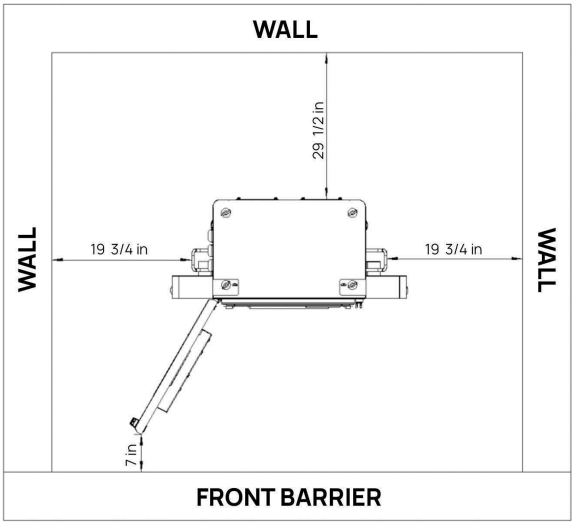


Figure 6 - Minimum Inspection Distance Requirements for Dispenser

4.3.2 - DISTANCE REQUIREMENTS BETWEEN CABINET AND DISPENSER

If the distance between the Power Cabinet and Dispenser is **less than 328 ft (100 m)**, a CAT6e Ethernet cable should be used for communication between the Cabinet and Dispenser.

- These communication wires MUST be in a separate conduit from the power wiring (AC or DC).
- If the communication conduit is run in the same trench as the AC or DC power conduit, then a 4" separation shall be maintained between conduits.

If the distance between the Cabinet and Dispenser is **greater than 328 ft (100 m)**, then optical fibers (specifically, armored multimode double core SC/SC cables) should be used for communication between the Cabinet and Dispenser.

For more information, please refer to *Section 5.3.5 - Communications Wiring*)

	**Reminder:** The above requirements are the minimum requirements for this equipment. The specific standards are subject to local laws and regulations.

5 - Installation Steps

Before commencing installation, ensure your preparations meet the following preliminary requirements:

1. You have all tools & personal protective equipment on hand and ready for use. See Section 3.1 - Installation Tools for a list of recommended equipment.
2. You have an engineered planset that is fully permitted by the relevant local Authority Having Jurisdiction, as delineated in Section 4.1.1 - Handover of Construction Drawings.
3. All AC, DC, auxiliary power, and communications conduit and cable is installed.
4. There is no power applied to any wiring during the installation process.

Installation Steps Outline:

1. Prepare for installation.
    a. Prepare the Site (Section 4 - Site Preparation)
    b. Unpack the EVSE components (Section 5.1 - Unpacking and Inspection)
2. Move the Cabinet and DIspenser into the correct locations and perform the mechanical installation. (Section 5.2 - Mechanical Installation)
3. Perform the electrical installation. (Section 5.3 - Electrical Installation)
    a. If necessary, install these optional elements:
        i. Cable management system. (Section 5.2.3 - Cable Management System (Dispenser Only))
    b. Prepare for commissioning. (Section 6 - Pre-Commissioning Steps)

5.1 - Unpacking and Inspection

5.1.1 - Unpacking Record Checklist

Upon receiving the crates containing the components for the EverCharge 240kW DCFC system, ensure the Tip-n-Tell sensors on the Cabinet and Dispenser crate exteriors are not compromised. If they are fine, proceed to unpack the unit and verify that everything ordered is present and in good working condition.

Be sure to fill out the Unpacking Record Form (Appendix A) while unpacking and verifying the system components are present and in good working order. Receive the site representative's signature for confirmation before proceeding.

1) Remove the crate panels and other packaging material.
2) Visually inspect the interiors and exteriors of the equipment to check for damage (chips, deformations, stains, etc.)
3) Verify that the parts received matches the system packing list (listed in Table 9, below). Ensure the equipment quantities received matches the site planset and/or the sales order.
4) Check that the equipment nameplate matches the equipment ordered.
5) Verify that the expected accompanying documents are present and complete.
6) Ensure the accessory keys are present.
7) Verify the Delivery Inspection Report & certificate are in good order.

Table 9 - System Packing List

Component	Packaging	Packaging Size	Weight	Accompanying Documents	Accessories
Power Cabinet (E800-1017)	Wooden Crate	46" x 35" x 89" 1170 x 890 x 2260 mm	990 lbs. 450 kg	1. User Manual 2. Delivery Inspection Report 3. Certificate of Conformity	- 1x Door Key
Dispenser (E800-1018)	Wooden Crate	46" x 31" x 86" 1170 x 790 x 2190 mm	530 lbs 240 kg	N/A	- 3x Air Filter Keys - 1x Door Key
8x Cabinet Power Modules	Cardboard Box	32" x 24" x 35" 810 x 610 x 890 mm	300 lbs 135 kg	N/A	- 4x Mounting Screws

If you find any damaged or missing parts, contact EverCharge customer support for next steps.

⚠ **Important**: Reach EverCharge Customer Support at *support@evercharge.com* or *888-342-7383*

5.1.2 - Pre-Installation Checklist

The installer must also complete the Pre-Installation Checklist (Appendix B) before proceeding.

If everything (including the Unpacking Record Form and the Pre-Installation Checklist) is in good order, proceed to Section 5.2 - Mechanical Installation in this manual.

5.1.3 - Shipping Damage

If the Tip-n-Tell Sensors on the Cabinet or Dispenser crate exterior indicate that the packaged experienced shock or tipping during transit, proceed with the following steps.

1) Refuse to accept delivery of the EVSE.
2) If unable to refuse delivery, describe any visible damage on the delivery receipt or BOL.
3) If the delivery was made without proper time to assess the damage, report it as soon as possible (must be within 3 days of the delivery date). Contact the freight company regarding the damage and provide evidence of the damage.
4) If you can see any damage on the Cabinet or Dispenser through the packaging material, do not accept the shipment or unpack the units.

5.2 - Mechanical Installation

5.2.1 - PREPARING AND MOVING THE CABINET

The installation diagram of the Cabinet base is shown below in Figure 7. The installation holes are marked in red circles.

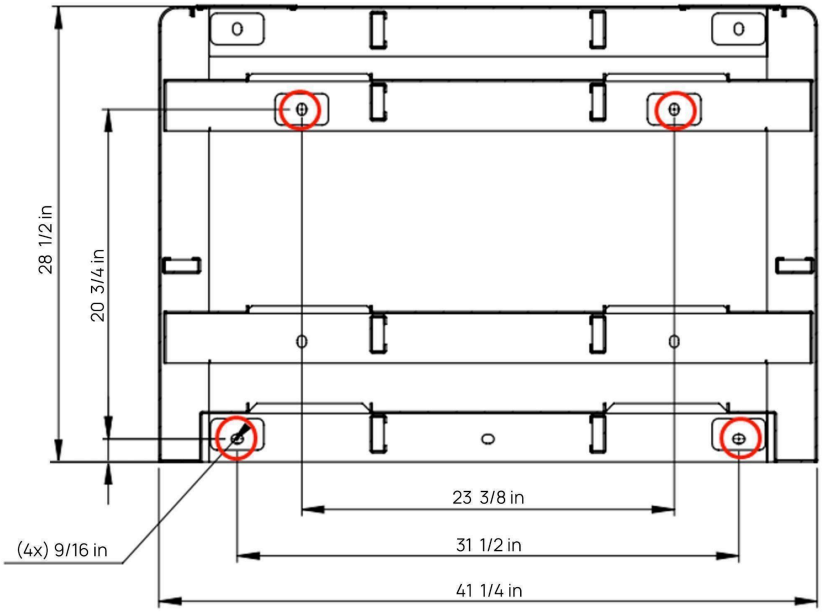


Figure 7 - Installation diagram of power cabinet base

1) Open the Cabinet door. Remove the sealing plates from the front and back of the base of the Cabinet, as shown in Figure 8.



Figure 8 - Sealing Plate Removal

2) Remove the 2 plates from the front side, as shown in Figure 9.

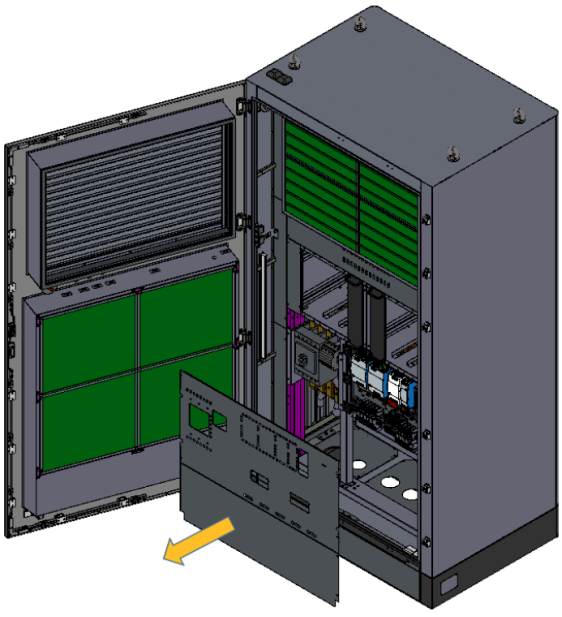


Figure 9 - Front Plate(s) Removal

3) Remove the plates for the AC and DC cable inlets, as shown in FIgure 10.

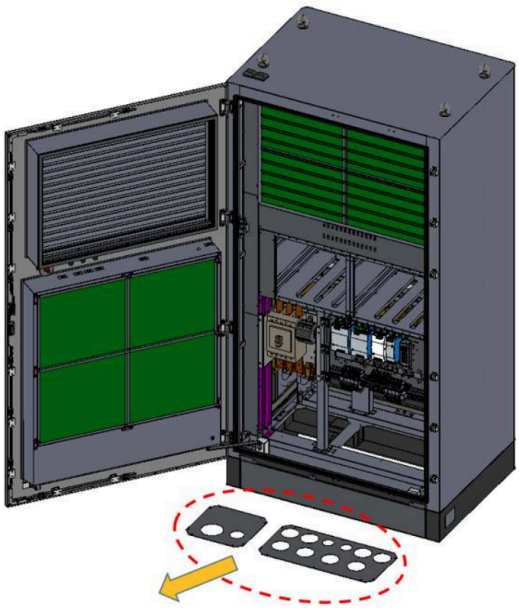


Figure 10 - AC and DC Cable Inlet Plate Removal

4) Close the front door and make preparations to move the Cabinet.

a) **Crane**

Use a crane to hoist the cabinet into the desired installation position. Make sure to allow for at least 38.5 in (970 mm) of space between the crane hoist and the top of the Cabinet, as depicted in Figure 11.

⚠ **Important**: Take care to protect the equipment from damage during transport.

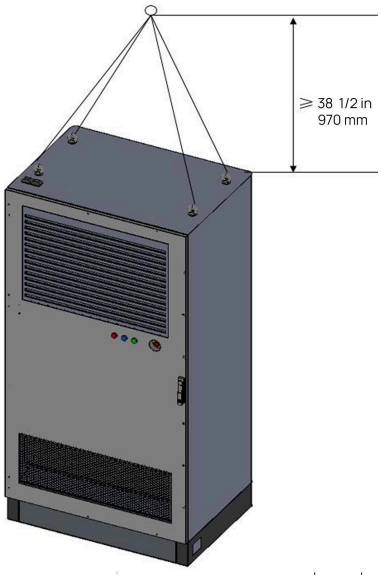


Figure 11 - Schematic of Hoisting the Power Cabinet

b) **Forklift**

A Forklift can also be used to move the Cabinet and Dispenser. Carefully insert the forks into the base of the component to move it (as shown in Figure 12). When setting down the Cabinet, make sure the 4 holes in the base are aligned with the bolts on the concrete foundation.

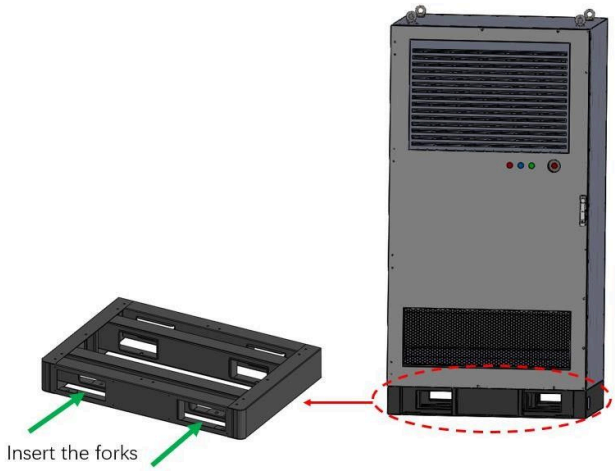


Figure 12 - Moving the Cabinet via Forklift

5) Fit the anchor bolts on the concrete foundation into the mounting holes on the bottom of the charger. Once fitted into place, use ½" nuts (or M12 if using metric hardware) torqued to 45 ft-lbs (58.4 NM) to secure the Cabinet onto the concrete.

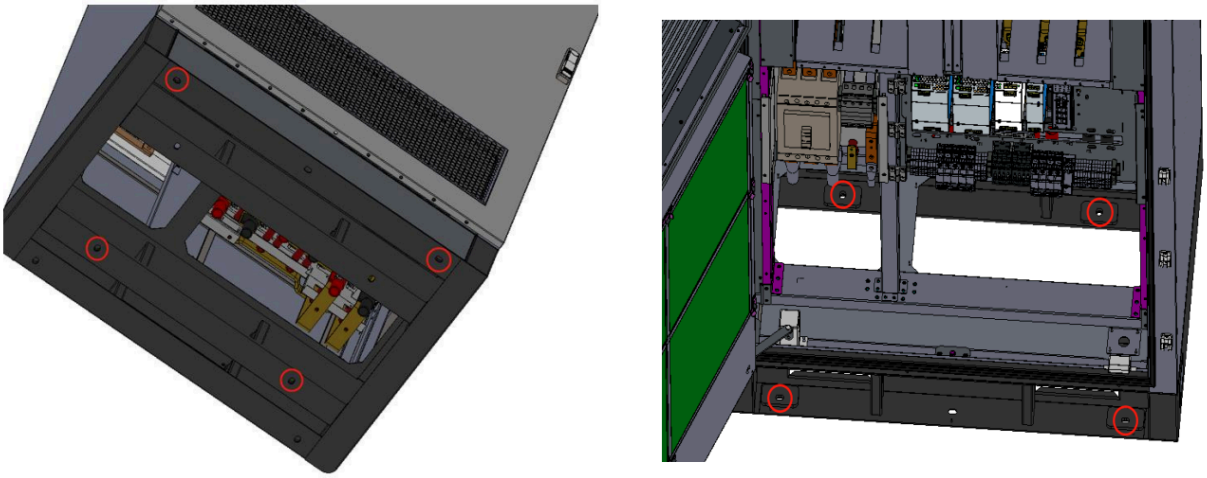


Figure 13 - Multiple Angles of the Mounting Holes on the Cabinet base

6) Put the sealing plates (from step 1) back onto the front and back sides of the Cabinet's base.

5.2.2 - PREPARING AND MOVING THE DISPENSER

The installation diagram for the Dispenser is shown below in FIgure 15.

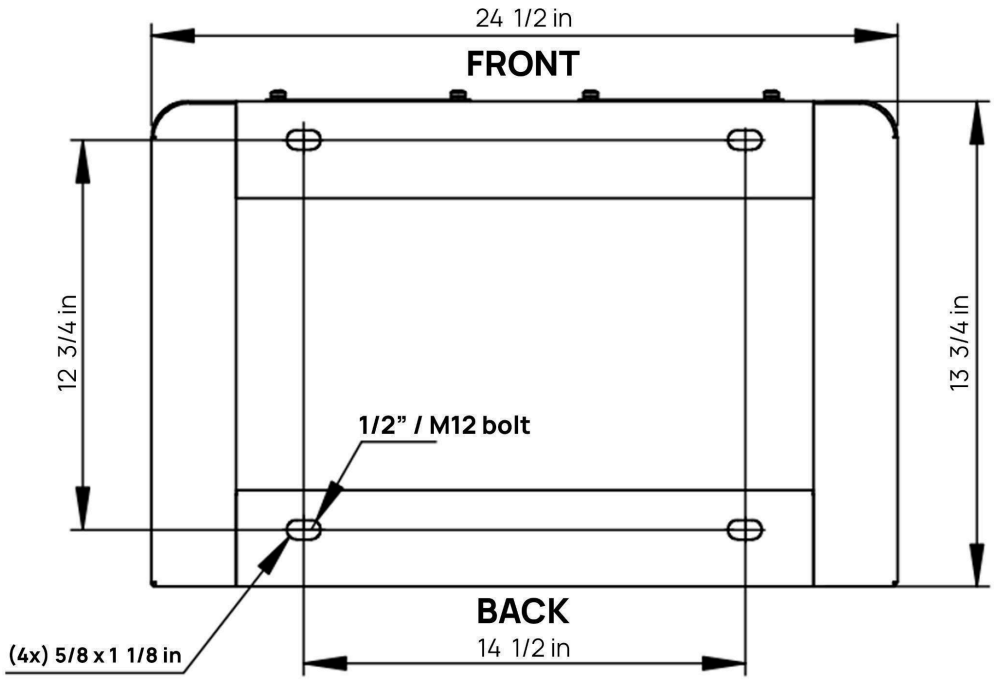


Figure 15 - Installation Diagram of the Dispenser Base

1) Remove the sealing plates from the front and back of the base of the Dispenser, as shown in Figure 16.

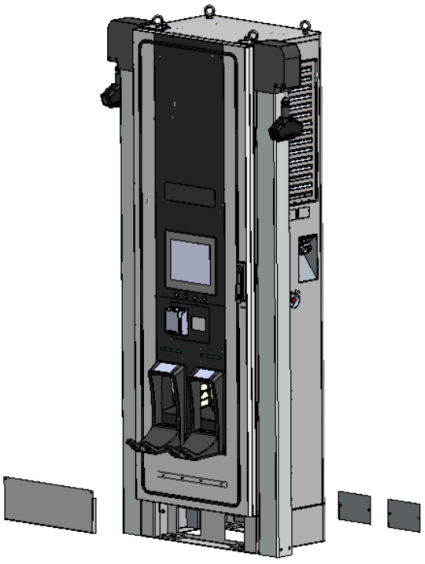


Figure 16 - Sealing Plate Removal

2) Ensure the door is securely latched. Use a crane to hoist the Dispenser into the desired installation position. Make sure to allow for at least 21.7 in (550 mm) of space between the crane hoist and the top of the Cabinet, as depicted in Figure 17.

⚠ **Important**: Ensure the shipping screws are removed before placing and rewiring the unit.

⚠ **Important**: Please take care to protect the equipment from damage during transportation.

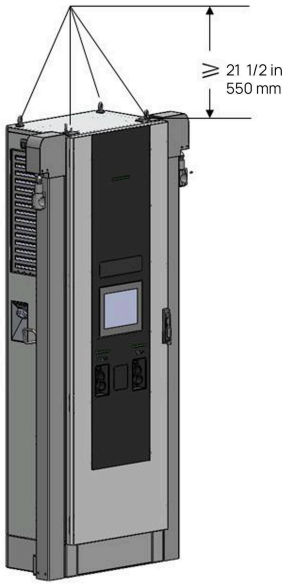


Figure 17 - Schematic of Hoisting the Dispenser

3) If the Dispenser is equipped with cable retractors, remove the two shipping screws at the bottom of the cable retractors to release the counterweights, as seen in Figure 18.

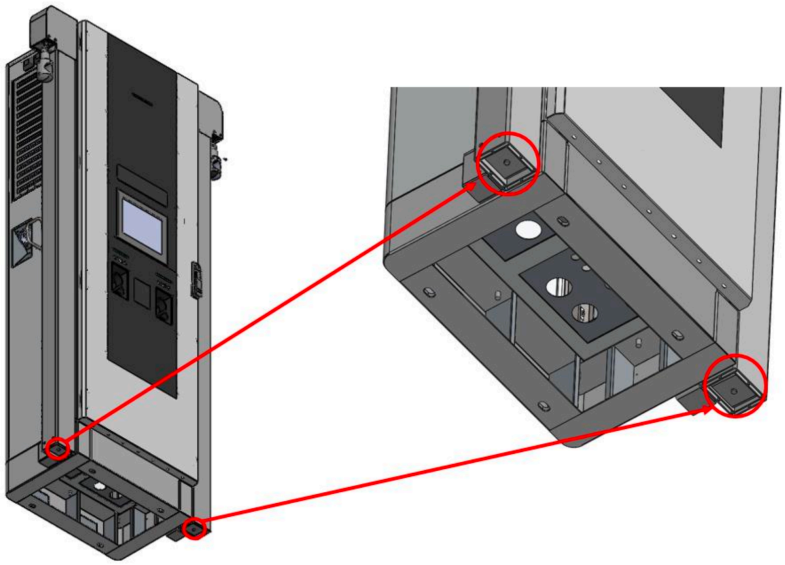


Figure 18 - Counterweight Block Locations

4) Once fitted into place, use ½" nuts (or M12 if using metric hardware) nuts torqued to 45 ft-lbs (58.4 NM) to secure the Dispenser onto the concrete.

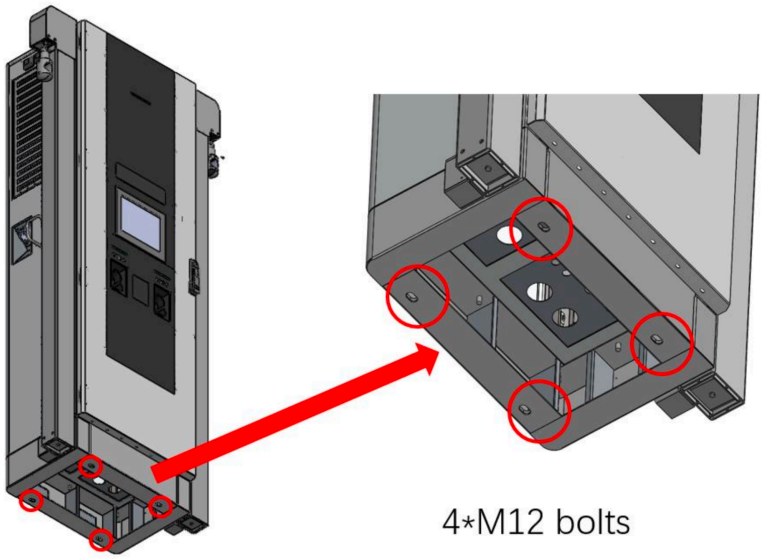


Figure 19 - Location of M12 Bolt Holes

5) Put the sealing plates (from step 1) back onto the front and back sides of the Dispenser's base.

5.2.3 - CABLE MANAGEMENT SYSTEM (DISPENSER ONLY)

If cable retractors are installed on the Dispensers, secure the charging cable with the clamp-on cable management system (as shown below in Figure 20).

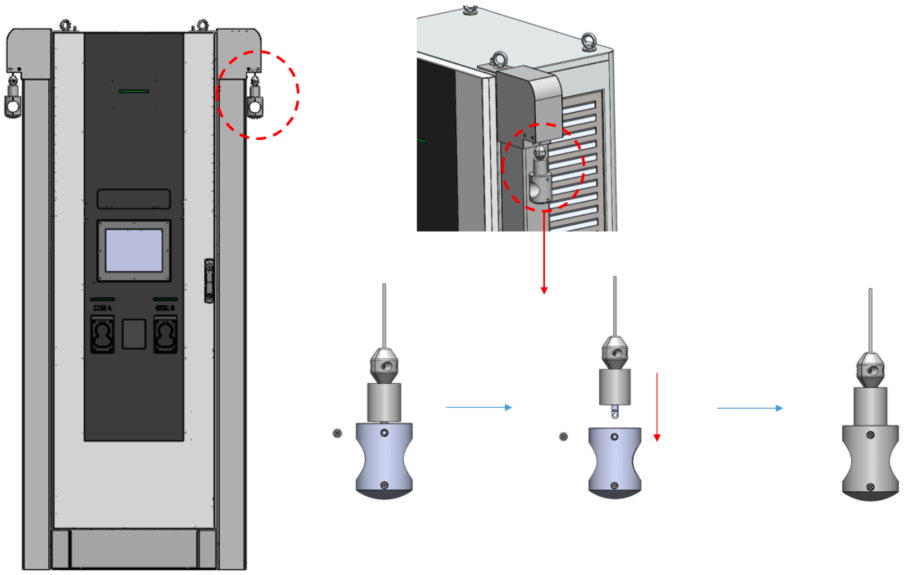


Figure 20 - Secure the Charging Cable using Clamp-On Cable Management System

5.3 - Electrical Installation

5.3.1 - WIRING AND CONDUIT OF THE CABINET

7) Feed the cables through the bottom of the Cabinet. Connect the cables to the corresponding cable terminals. A legend for the cable inlet holes are shown in Figure 21.

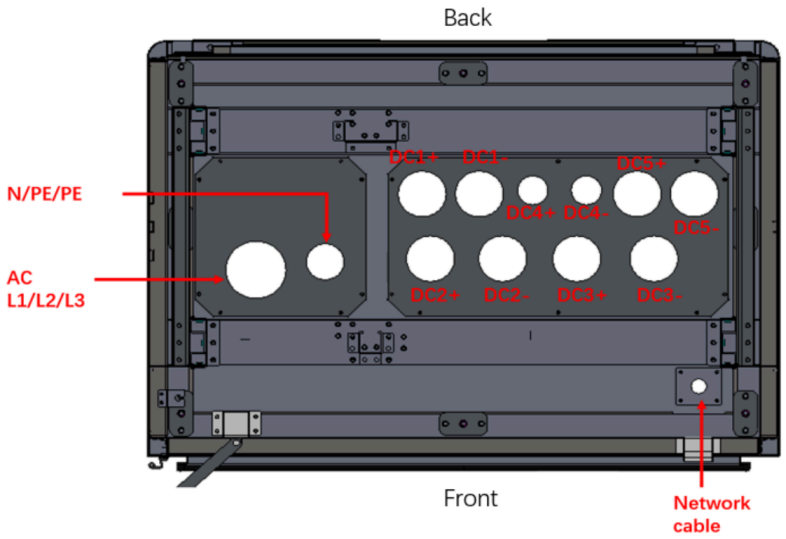


Figure 21 - Schematic of Cable Inlet Holes (on bottom of Cabinet)

5.3.2 - WIRING AND CONDUIT OF THE DISPENSER

6) Feed the cables in through the bottom of the DIspenser. The cable inlet holes are shown in Figure 22; connect the cables to their corresponding cable terminals.

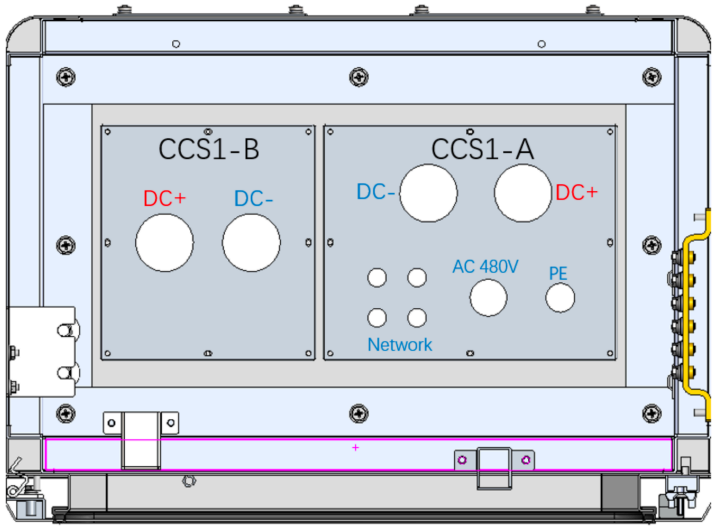


Figure 22 - Schematic of Cable Inlet Holes (Bottom-Up View of Dispenser)

5.3.3 - AC INPUT WIRING

1. Prepare the wires:
    a. Trim the wires (L1), (L2), and (L3) to the correct length. Ensure there is sufficient slack for connecting to the busbar without inducing any strain on the wire or the busbar.
    b. Strip the insulation from the end of the wires. Ensure the strip length is compatible with the cable lugs (E).
    c. Attach the ring terminal lugs to the ends of the wires using a hydraulic crimping tool. Make sure to use the correct die for the lugs.
    d. Once crimped, tug on the lug firmly to ensure a solid connection.
    e. Insert the lug through an appropriately sized piece of heat shrink tubing, and heat the tube evenly until it fully conforms to the joint between the wire and the lug.

2. Attach the wires to the busbar:
    a. L1 wire (A) to the connector (G)
    b. L2 wire (B) to the connector (H)
    c. L3 wire (C) to the connector (I)

    ⚠ **Important**: Use the included fasteners on each connection. Refer to Figure 23 below for the correct order.

3. Tighten the fasteners to the correct torque (as given in Appendix D - Torque Specifications).

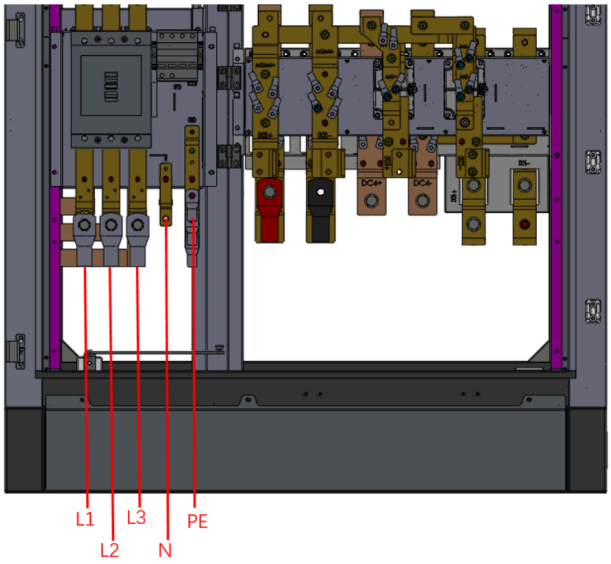


Figure 23 - Schematic Diagram of AC Power Copper Busbar in Cabinet

5.3.4 - DC OUTPUT WIRING

DC Dispenser Wiring: 240 kW Cabinet + 2* Dual CCS1 (200A) Dispensers

Each 240kW Cabinet can support up to two Dispensers, with each Dispenser having [up to] two CCS charging handles per unit. This means that in a standard 1:2 Cabinet-to-Dispenser installation, there will be 4 pairs of DC Positive/Negative conductors in total to power all 4 CCS handles in this system.

There are 5 groups of DC+/DC- outlet copper busbars in the Cabinet which connect to the Dispensers via a power cable (as shown in Figure 24).

The connection sequence is as follows:

- DC1+ & DC1- connect to CCS1-A (Dispenser 1)
- DC2+ & DC2- connect to CCS1-B (Dispenser 1)
- DC3+ & DC3- connect to CCS1-A (Dispenser 2)
- DC4+ & DC4- connect to CCS1-B (Dispenser 2)
- OPTIONAL: DC5+ & DC5- Connect to another Cabinet for combined use.

⚠ **Important**: The Cabinet's PE copper busbar must be connected to the Dispenser's PE copper busbar.

These conductors need to be sized in accordance with the sizing guidelines outlined in Section 4.1 - Site Distribution and Wiring Requirements of this manual or local code requirements.

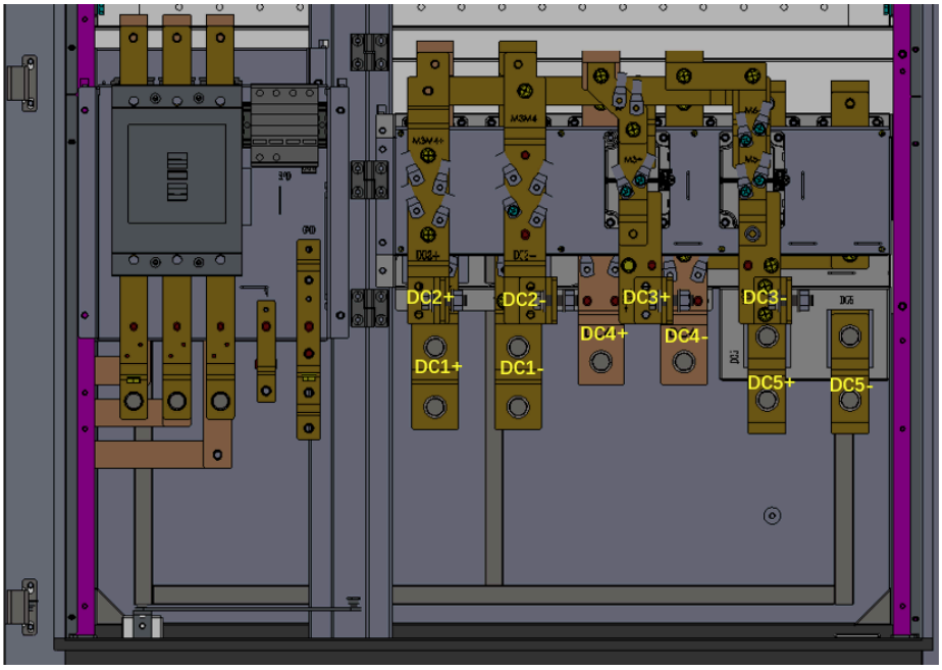


Figure 24 - DC+ & DC- Busbar in Cabinet (Back)

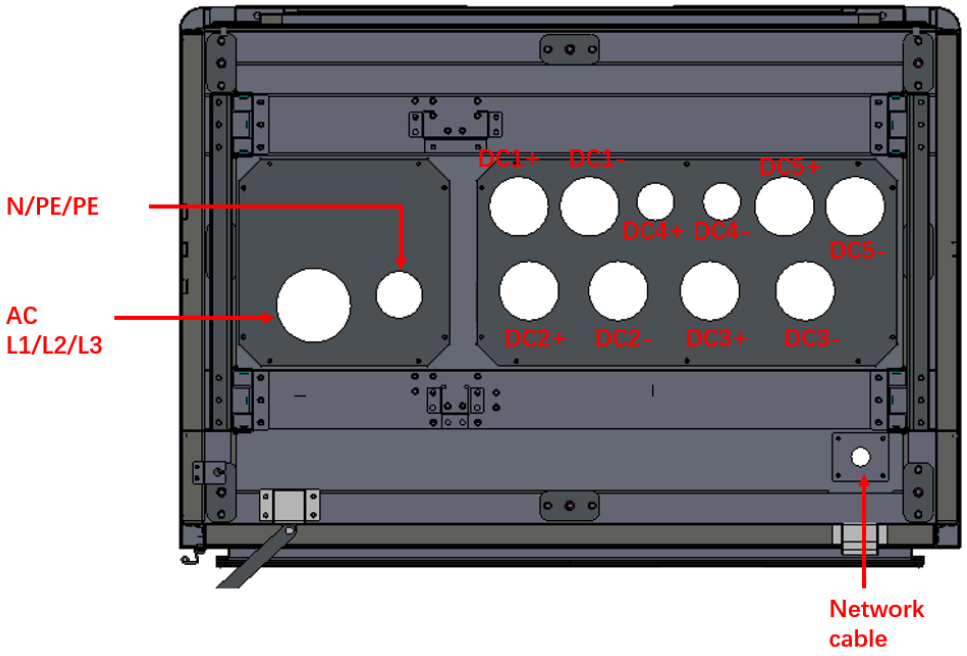


Figure 25 - Cable Inlet Holes for DC Wiring (Front)

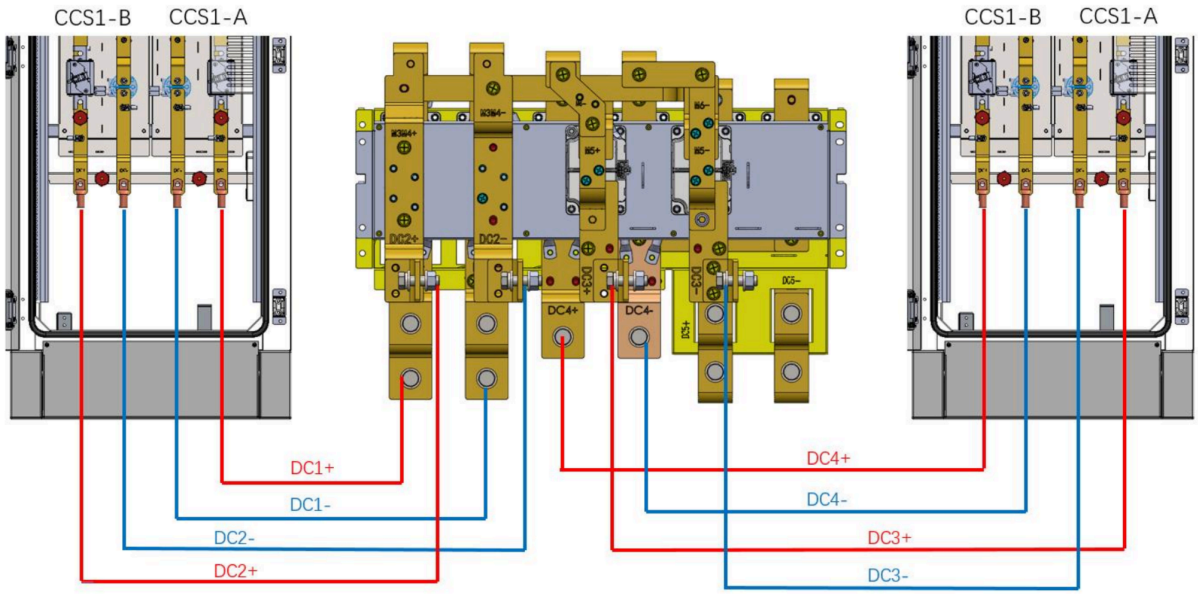


Figure 26 - DC Connections between Cabinet and 2 Dispensers

DC Dispenser Wiring: 240 kW Cabinet + 1* Dual CCS1 (200A) Dispenser

If only 1 DIspenser is being installed with the 240 kW Cabinet, the connection sequence is as follows:

- DC1+ & DC1- connect to CCS1-A (Dispenser 1)
- DC3+ & DC3- connect to CCS1-B (Dispenser 1)

⚠ **Important**: The Cabinet's PE copper busbar must connect to the Dispenser's PE copper busbar.

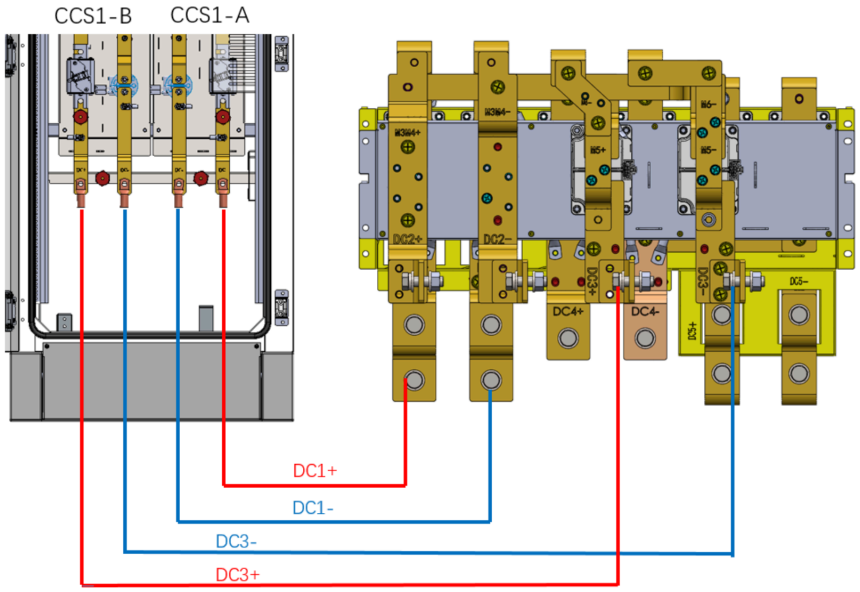


Figure 27 - DC Connections between Cabinet and 1 Dispenser

Grounding

A grounding conductor (GC) from the busbar of the Cabinet must be connected to the grounding busbar in the Dispenser. For grounding conductor size guidelines, see Table 10 and/or local code requirements.

Table 10 - Equipment Ground Conductor Sizing		
Rating or Setting of the Overcurrent Device in Circuit Ahead of Equipment, Not Exceeding (A)	**Size Copper AWG**	**Aluminum or Copper Clad Aluminum AWG**
60	10	8
100	8	6
200	6	4
300	4	2
400	3	1
500	2	1/0
600	1	2/0
800	1/0	3/0

⚠ **Warning**: Do NOT use Terminal DC5 Positive and Negative to connect to any Dispensers.

480V Power Cable

To power the Dispenser, an auxiliary 480V AC power feed is provided from the Cabinet.

Prepare the Wires through the following steps:

1) Loosen the screws of the terminal block.
2) Connect the wires:
    a) L1 from the Cabinet breaker to the terminal
    b) L2 from the Cabinet breaker to the terminal
3) Tighten the breaker screws to the correct torque (as defined in Appendix D: Torque Specifications).

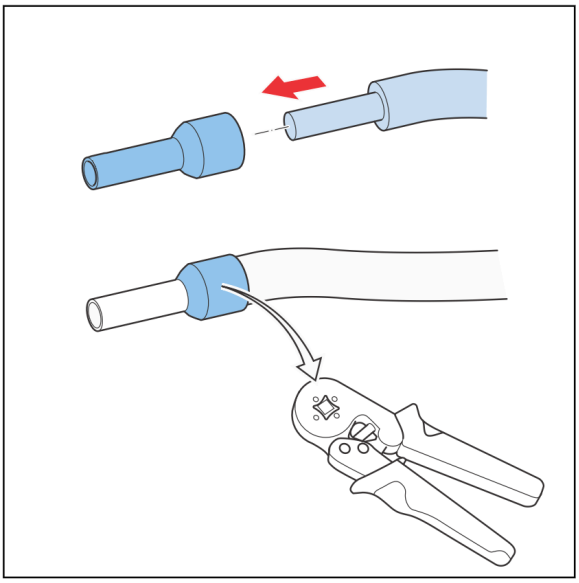


Figure 28 - Preparing the Wires for the 480V AC Power Feed

Connect the 480V power outlet MCB of the Cabinet to the 480V inlet terminal of the Dispenser using a laid cable, as shown in Figure 29.

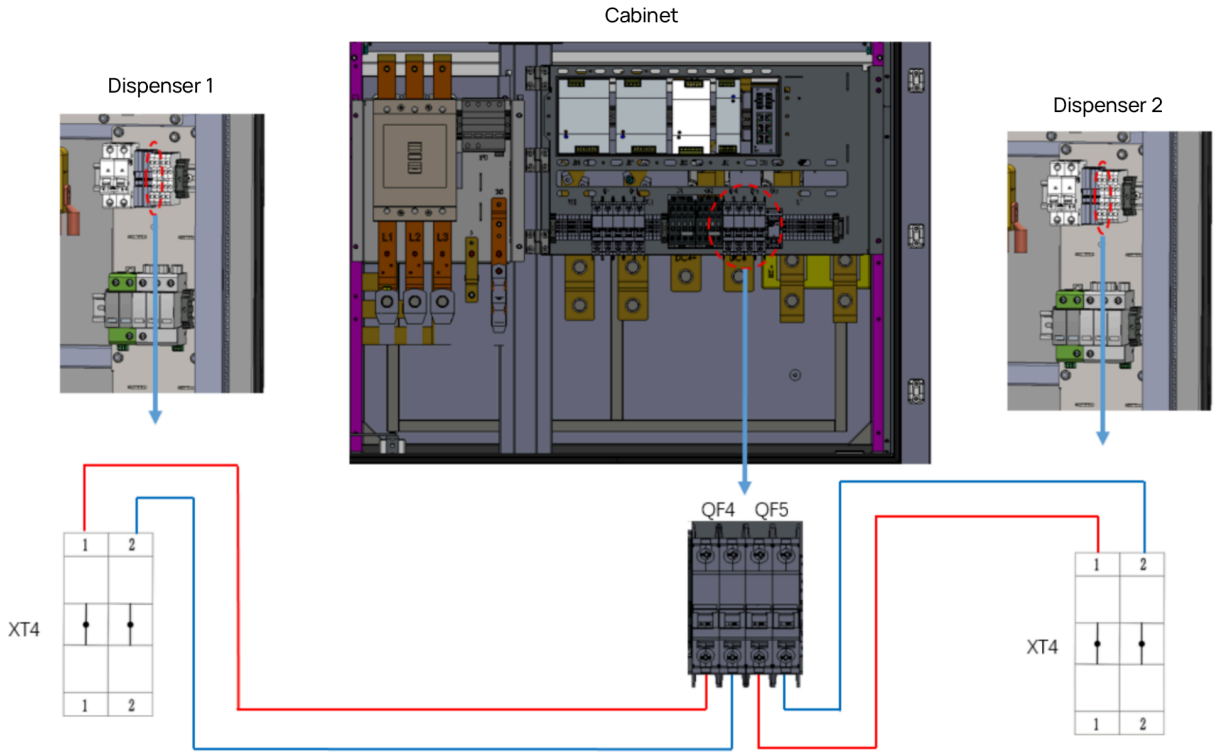


Figure 29 - Wiring Schematic Diagram of AC480V Power Supply

5.3.5 - Communications Wiring

For Installations Less Than 328 ft (100 m)

Ethernet cabling is required to connect the Cabinet to the Dispenser. This cable can be either a pre-terminated patch cable of the correct length or a more commonly-found bulk CAT6e cable that is then terminated in the field. Both options must conform to the following specifications (laid out in Table 11, below) to ensure proper performance of the 240kW DCFC device.

Table 11 - Communication Cable Requirements (< 100m / 328 ft)	
Cable Type	CAT6e
Number of Conductors	8 (4 pairs)
Min Conductor AWG	24
Termination	RJ45
Termination Standard	T-568B

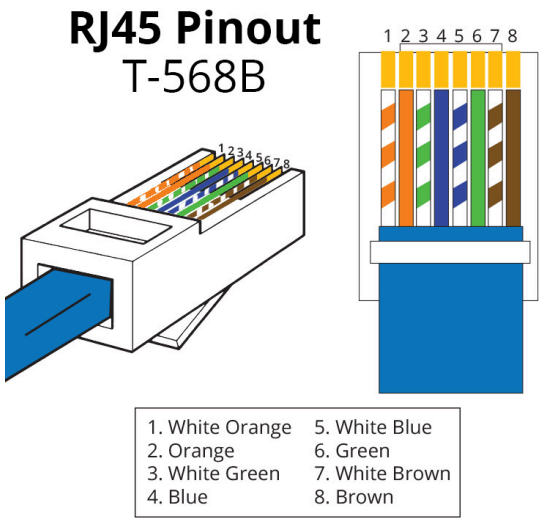


Figure 30 - RJ45 Pinout Schematics

Termination and Installation

⚠ **Important**: This cable should be a straight-through type. DO NOT use crossover cables.

1. Terminate both sides of the ethernet cable with RJ45 connections
2. Test the cable using a network cable tester to ensure that continuity and pin arrangement are correct.
3. Connect the Cabinet as shown in Figure 31
4. Connect the Dispenser as shown in Figure 31.

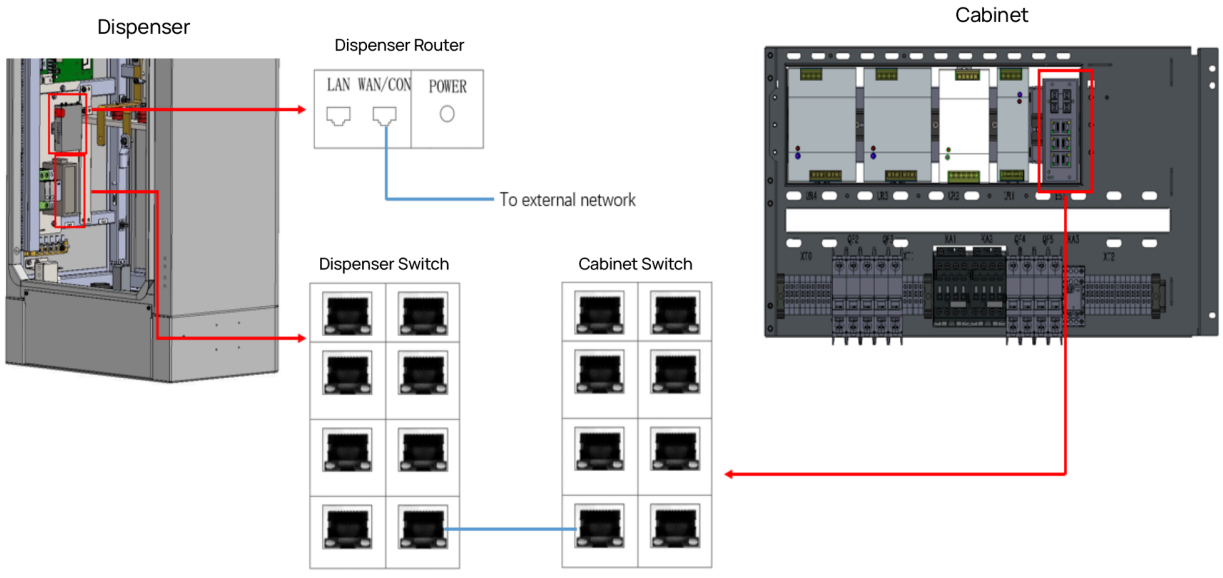


Figure 31 - Schematic Diagram of Network Cable Connection in Single-Cabinet System

For Installations Greater Than 328 ft (100 m)

If the distance between the Cabinet and Dispenser is greater than 328 ft (100 m), it is recommended to switch to fiber optic communications lines (Armored Multi-Mode 50/125um, double core (MMF)) between the units to maintain signal integrity and system performance. The requirements for these cables are stated in Table 12.

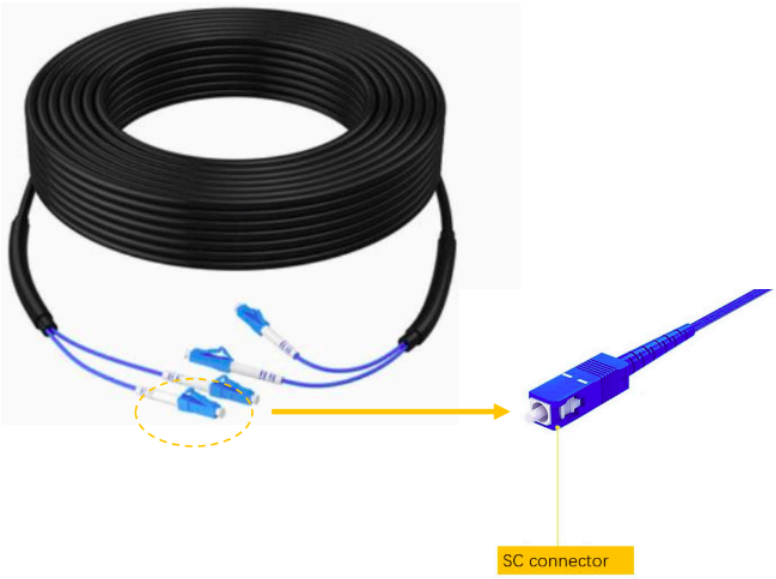


Figure 32 - Fiber Optic Communications Wiring

Table 12 - Communication Cable Requirements (≥ 100m)	
Cable Type	Armored Multi-Mode 50/125um, double core (MMF)
Outer Diameter	¼ in (6mm)
SC Connector Model	YFOC-M-SC, SC Multi-mode 50/125um.
Insertion Loss	≤0.3dB
Return Loss	≥35 dB
Interchangeability	≤0.1dB
Repeatability	≤0.1dB
Operating Temperature	-22°F - 175°F (-30°C - 80°C)
Storage Temperature	-22°F - 185°F (-30° - 85°C)

5.3.6 - INSTALLATION OF POWER MODULES

1) Open the front door of the Cabinet, and gently insert the power modules into the module slots as shown in Figure 33. A total of 8 Power Modules will be installed in each 240kW Cabinet.



Figure 33 - Installation of Power Modules

2) Each module shall be secured with 4x M4*12 Phillips screws as shown.

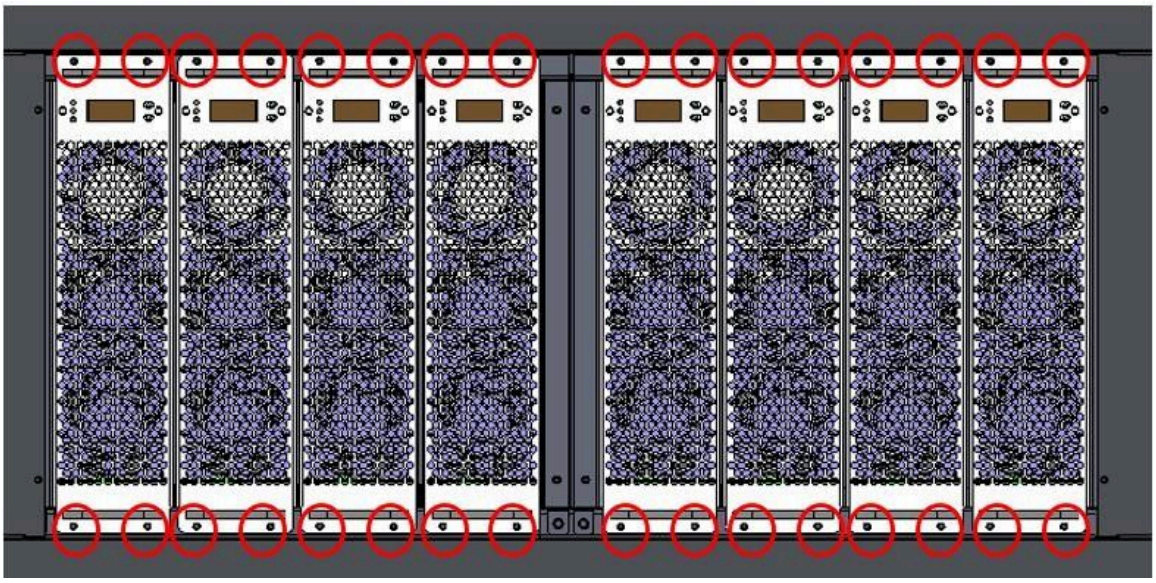


Figure 32 - Power Module Installation

⚠ **Warning**: Make sure to follow the proper installation procedures as given in this manual to avoid potential injuries and/or death.

6 - Pre-Commissioning Steps

⚠ **Warning**: Live electrical equipment should only be operated by engineers and/or personnel with relevant local qualifications.

Complete the following steps post-installation steps prior to turning on the EverCharge 240kW DCFC system. Complete the Post-Installation Checklist (Appendix C).

6.1 - Installation and Wiring Inspection

6.1.1 - EQUIPMENT INSPECTION

1) Ensure the charging equipment is pristine and clean, without surface defects.
2) Ensure the charging equipment is fastened properly to the concrete base, and the entire assembly is level as directed in this manual.
3) Make sure all necessary components of the equipment are present and installed correctly.

6.1.2 - CABLE AND CONNECTION INSPECTION

1) Verify the cable jacket is not scratched or damaged.
2) Ensure the connecting power cable terminals are securely attached to the charging equipment.
3) Ensure the communication cable has been wired correctly and is securely attached to the equipment.
4) Check that the cables' bending radius will not cause damage to the cables.
5) Make sure the Cabinet and Dispensers are grounded correctly.

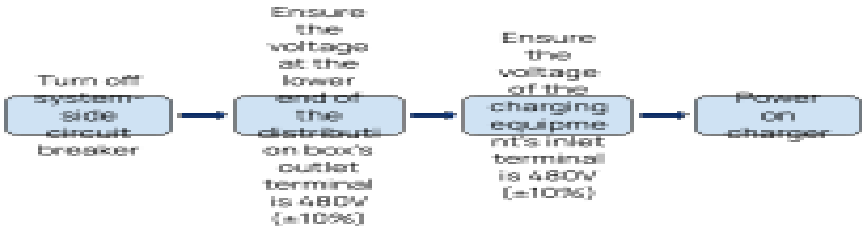
6.2 - Check Before Power-On

1) **Short Circuit** - On the low-voltage distribution Cabinet, check that the power cable does not have a short circuit between the three-phase wire, neutral wire, and ground wire.

2) **Power Voltage before Power-On** - Before powering on the equipment, check whether the power voltage at the upper end of the MCCB in the Cabinet is normal with no phase lack, overvoltage, undervoltage, phase-sequence anomaly, or other abnormalities.

6.3 - Power-On Inspection

The equipment can only be powered on after confirming that the equipment has been wired correctly. The power-on operation is as follows:



7 - Installation Environment

Do not perform installation operations outdoors on rainy days.

Table 13 - Installation Environment Requirements	
Ambient Conditions	**Recommended Range**
Ambient Temperature	-30°C to 55°C
Altitude	≤ 2000m
Humidity	5% - 95% RH No condensation inside the product
Degree of Dust	≤ 1 mg/m^3
Corrosive Substances	No pollutants (salt, acid, smoke, etc.)
Vibration	≤ 1.5 mm/s^2
Insects, Pests, Vermin, Termites	None
Mold	None
Moisture	Rain Prevention
Fire Prevention	No flammable substances in immediate vicinity of Cabinet

8 - Completion Documents

Completion of the following documents is required for the Installation of the 240 kW system:

1) Unpacking Record Form (Appendix A)
2) Pre-Installation Checklist of 240kW Split Charging System (Appendix B)
3) Post-Installation Checklist of 240kW DCFC System (Appendix C)

Appendix A - Unpacking Record Form

Unpacking Record Form					
Owner's Name				Unpacking Date	
No.	Case	Name	Quantity	Acceptance	Notes
Unpacking Conclusions		Installation Unit		Owner's Unit	
Signature				Date	

Appendix B - Pre-Installation Checklist for 240 kW Cabinet

Pre-Installation Checklist for 240 kW Power Cabinet					
Contractor:		**Electrical Contractor:**		**Project Name:**	
Sub-Project		**Main Acceptance Criteria**		**Acceptance Records**	**Treatment Measures**
Installation Plan		Does the on-site equipment installation comply with the construction plan design drawings?			
Distribution Box Circuit Breaker		Does the Circuit Breaker meet the electrical installation requirements? (The maximum input current of each 240 kW Power Cabinet is 342A)			
Cable Type		Do the selected cables meet the requirements of Section 3.2.3 - Power Cable Checklist?			
Concrete Foundation		Do the dimensions of all the concrete foundations meet the requirements of Section 4.2 - Concrete Foundation Requirements?			
Maintenance Channel		Does the maintenance channel meet the equipment distance requirements of Section 4.3 - Equipment Spacing Requirements?			
Conclusions:					
Note: 1) In the Acceptance Record, fill in "✓" or "✗" according to the on-site situation 2) In the Conclusion section, fill in "Qualified: or "Needs to be Rectified" according to the on-site situation					
Signature of Inspector: _____ **Date:** _____					

Appendix C - Post-Installation Checklist for 240kW Cabinet

Post-Installation Checklist for 240 kW Power Cabinet					
Contractor:		**Electrical Contractor:**		**Project Name:**	
Sub-Project		**Main Acceptance Criteria**		**Acceptance Records**	**Treatment Measures**
Equipment Inspection		Is the charging equipment present, installed, and secured properly? Does the installation visually look professional?			
Cable and Connection Inspection		Are all power and communication cables intact, properly laid, hooked up, and grounded correctly?			
Short Circuit		Is there a short circuit between the three-phase wire, neutral wire, and ground wire?			
Power Voltage		Is the power voltage at the upper end of the MCCB normal (with no phase lack, overvoltage, undervoltage, or other abnormalities?			
Conclusions:					
Note: 1) In the Acceptance Record, fill in "✓" or "✗" according to the on-site situation 2) In the Conclusion section, fill in "Qualified: or "Needs to be Rectified" according to the on-site situation					
Signature of Inspector: _____ **Date:** _____					

Appendix D - Torque Specifications

The following tables outline the required torque values that must be reached for proper installation of the EVSE.

⚠ **Important**: A calibrated torque wrench or screwdriver **MUST** be used when torquing the various fasteners inside and outside the charger. Failure to do so may result in damage to the charger and/or poor performance.

⚠ **Important**: Per NEC 110.14(D), proper torquing of electrical terminals is required: ***Terminal Connection Torque***. *Tightening torque values for terminal connections shall be as indicated on equipment or in installation instructions provided by the manufacturer. An approved means shall be used to achieve the indicated torque value.*

Table 14 - Cabinet - Torque Values	
L1, L2, L3 Lugs	57.5 ft-lbs (78 NM)
Ground and Neutral Lug	18.75 ft-lbs (25.5 NM)
DC1 - DC4 Lugs	57.5 ft-lbs (88.25 NM)

Table 15 - Dispenser - Torque Values	
DC +/- Lugs	41 ft-lbs (55.75 NM)
Grounding Lug	7.8 ft-lbs (10.75 NM)

Table 16 - Cabinet Foundation Bolts - Torque Values	
½ x 6 in (M12 x 150mm) Anchor	45 ft-lbs (58.4 NM)

Table 17 - Dispenser Foundation Bolts - Torque Values	
½ x 6 in (M12 x 150mm) Anchor	45 ft-lbs (58.4 NM)

Appendix E - Copper Cable Terminal Specifications

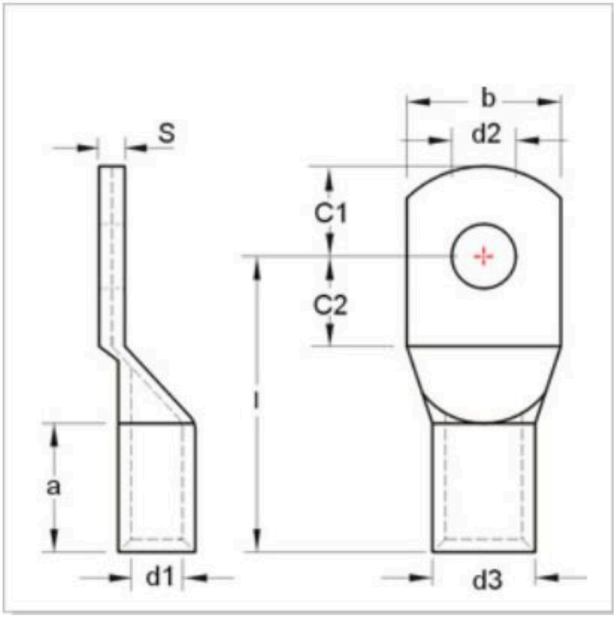


Figure 33 - Copper Cable Terminal Dimensions

Table 18 - Copper Cable Terminal Dimensions										
Wire Range	Model	Dimension (mm)								
		A	B	C1	C2	D1	D2	D3	I	S
2AWG 35mm^2	TLK35-8	17	17	10	10	8.5	8.4	12	34	3.2
4/0AWG 120mm^2	TLK120-12	26	28	14	14	15	13	19.5	51	4.3
600 Kcmil 185mm^2	TLK185-12	30	35	18	18	19	13	24	65	4.7
400 Kcmil 240mm^2	TLK240-12	35	39	21.5	21.5	21	13	26	72.5	4.8

Appendix F - Technical Data

Equipment Specifications Datasheet

Table 19 - Equipment Specifications Datasheet			
		240kW Power Cabinet	**Dual Handle Dispenser with Cable Management**
Power Input	**Input Rating**	408-530 VAC, 50/60 Hz, L1+L2+L3+N+PE	DC: 150-1000 VDC AC: 432-528 VAC (Aux. power from power cabinet)
	Power Factor	≥0.98	N/A
Power Output	**DC Output Voltage**	150-1000 VDC	
	Output Rating	240kW (4 outputs)	N/A80kW @ 400VDC and 160kW @ 800V per handle max
	Max Output Current	800A @ 300V 600A @ 40 V	200A CCS1 (A) & 200A CCS1 (B)
	Connector Type	N/A	CCS1 + CCS1
User Interface and Control	**Display**	LED Status Lights	10.4'' LCD Touch Panel
Environmental	**Operating Temperature**	-30°C - 55°C (>50°C derating)	
Mechanical	**Cable Length**	N/A	16.4 ft (5 m)
	Ingress Protection	NEMA 3R/IK10	
	Dimensions	80.70 in x 41.33 in x 29.52 in 2050 mm x 1050 mm x 750 mm	78.7 in x 37 in x 17.71 in 2000 mm x 940 mm x 450 mm
	Net Weight	882 Lbs (400 kg)	575 Lbs (260 kg)
Regulation	**Certificate**	UL2202, UL2231-1/-2, FCC part 15B, Energy Star	
Connectivity	**Wireless**	Ethernet	4G + Mesh Networking

Charging Handle Specifications

Table 20 - Amphenol 200A CCS Cable Specifications	
Compliant to:	SAE J1772, IEC62196-3
Cable Length without Connector	198 in (500 mm)
Cable Length with Connector	206 in (5230 mm)
Bend Radius	16 in (400 mm)
Rated Current	200A
Rated Voltage	1000 VDC
Mating Cycles	> 10,000 Cycles (unloaded)
Insertion/Withdrawal Force	< 16.8 lbf (75 N)
Operating Temperature	-22°F to 122°F (-30°C to 50°C)

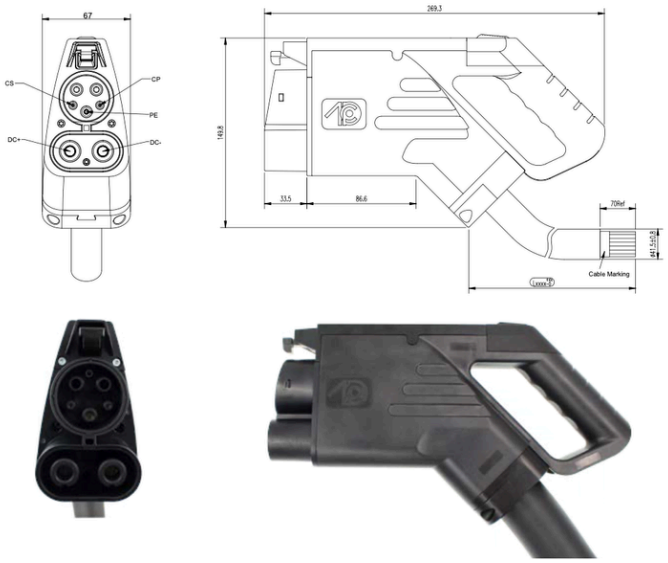


Figure 34 - Schematic Diagram of Charging Handle

Height of User-Operable Elements

According to the ADA (Act of Disabled Americans), the height of user-operable Americans must be between specific limits:

- Maximum Height: 48 in (1.22 m)
- Minimum Height: 15 in (0.4 m)

To ensure ADA compliance, make sure that the distance from the site-finished grade to the operable elements of this charging system are in accordance with these above requirements.

General AC Input Specifications

⚠ **Note**: Power limiting is possible via software configuration.

Table 21 - General AC Input Power Specifications	
Parameter	**Specification**
AC Input Connection Type	3PH w/N + PE (WYE Input)
AC Input Voltage Range	480 VAC +/- 10% (50/60 Hz)
Power Factor at Full Load	0.9 (or greater)
Efficiency	> 94% at nominal output power
Total Harmonic Distortion (Ithd sum L1, L2, L3)	< 7.94%
Total Harmonic Distortion (Vthd sum L1, L2, L3)	< 0.79%

DC Output Specifications

Table 23 - DC Output Specifications	
Parameter	**Specification**
DC Output Voltage Range, CCS	200 - 1000 VDC
Minimum DC Output Current	15A @ 400V
Connection Standard	CCS (IEC 61851-23:2014 , IEC 62196-1: 2014, IEC 62196-3: 2014)
DC Output Power on One EV Charge Cable	Maximum 90 kW
Simultaneous DC Power on Two Outlets	Yes. Handle A must be plugged in before Handle B on a Dispenser to enable simultaneous charging.
Maximum DC Output Current	CCS: 200A / handle

Charger Output Capacity with Respect to Voltage

Table 24 - Charger Output Capacity with Respect to Voltage			
Charger Capacity	**Voltage (V)**	**Current (A)**	**Power (kW)**
150	0	0	0
150	240	150	36
200	300	200	60
300	300	300	90
400	225	225	90
600	150	150	90
800	113	113	90
920	90	90	90

Example Maintenance Schedule

Table 25 - Example Maintenance Schedule											
Part Name	**Years After Startup**										
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Filter Inlet Kit	R	R	R	R	R	R	R	R	R	R	R
Filter Outlet Kit	I	R	I	R	I	R	I	R	I	R	I
Fan Cabinet	I	I	I	I	I	R	R	R	R	R	R
Power Module	I	I	I	I	R	R	R	R	R	R	R
DC Fuse 200A	I	I	I	R	I	I	I	R	I	I	R
Note: R = Replace I = Inspect											

Appendix G - Power Harmonics

Operating Conditions: 225A @ 400 VDV

Table 26 - Voltage Total Harmonic Distortion		
Vthd (L1)	**Vthd (L2)**	**Vthd (L3)**
0.30%	0.24%	0.25%
I THD (L1)	**I THD (L2)**	**I THD (L3)**
2.91%	2.47%	2.56%
I PWHD (L1)	**I PWHD (L2)**	**I PWHD (L3)**
2.91%	2.47%	2.56%

Table 27 - Power Harmonics			
Harmonic Order	**Phase L1 I Harmonics (%)**	**Phase L2 I Harmonics (%)**	**Phase L3 I Harmonics (%)**
2	1.3422	1.1915	1.2195
3	0.1616	0.0403	0.1524
4	0.223	0.06	0.2892
5	2.3016	2.0202	1.9861
6	0.4377	0.1698	0.277
7	0.5831	0.6238	0.8375
8	0.1937	0.2093	0.2108
9	0.133	0.0497	0.1155
10	0.254	0.1466	0.2755
11	0.8225	0.6515	0.6319
12	0.5175	0.2122	0.3052
13	0.3244	0.0368	0.3568
14	0.2982	0.2348	0.2197
15	0.1192	0.0406	0.0823
16	0.2497	0.2294	0.2497
17	0.5165	0.5101	0.4164
18	0.494	0.21	0.2876
19	0.3739	0.1411	0.3783
20	0.3013	0.2354	0.2436

Harmonic Order	Phase L1 I Harmonics (%)	Phase L2 I Harmonics (%)	Phase L3 I Harmonics (%)
21	0.0913	0.0796	0.033
22	0.28	0.2627	0.1989
23	0.3356	0.3694	0.2422
24	0.4152	0.1656	0.2462
25	0.3281	0.2361	0.3843
26	0.1833	0.1819	0.2419
27	0.1336	0.0816	0.0666
28	0.1954	0.2121	0.1439
29	0.3079	0.3438	0.2639
30	0.285	0.1231	0.1619
31	0.2303	0.2012	0.292
32	0.1604	0.1331	0.1896
33	0.1267	0.0791	0.0581
34	0.1069	0.1224	0.0983
35	0.2298	0.2416	0.2213
36	0.2041	0.0973	0.1139
37	0.1717	0.1795	0.2228
38	0.0879	0.1	0.125
39	0.0499	0.0508	0.0336
40	0.0751	0.1089	0.0818
41	0.2284	0.2205	0.1863
42	0.1015	0.0493	0.049
43	0.1422	0.1364	0.1392
44	0.0407	0.061	0.0792
45	0.0324	0.0517	0.0232
46	0.056	0.0619	0.0583
47	0.1275	0.1404	0.1201
48	0.1123	0.0595	0.0624
49	0.1247	0.1197	0.1017
50	0.026	0.0752	0.0649

Appendix H - Equipment Failures - Emergency Protocols

Disclaimer

This guideline should be reviewed by the customer's operations or facilities manager and is intended to be used by trained and certified equipment operators. It assumes that the readers have full understanding of how the equipment works and have completed the appropriate training required to safely handle emergency situations. This procedure should be used in conjunction with the company's emergency response plans.

Important Safety Notes

This document contains important warnings that must be followed when handling EverCharge systems in an emergency situation. EverCharge customers should develop a company emergency response plans and contingencies to respond effectively to equipment failures.

EverCharge Equipment Failures

Operators should be attentive to the equipment and its performance to be able to identify equipment failures. Types of failures could be mechanical, electrical, and/or software failures.

⚠ **WARNING**: Always use appropriate tools, and always wear appropriate personal protective equipment (PPE) when working around EverCharger equipment and electrical equipment. Failure to comply can result in serious injury.

⚠ **WARNING**: Regardless of the shutdown method you use, always assume that all high voltage components are energized! Improperly touching high voltage components can result in serious injury.

Electrical failure - Be aware of electrical hazards such as smoke and/or fire.

⚠ **WARNING**: Ensure all personnel are moved to a safe distance away from the EV Charger (refer to company's emergency response plans for the recommended safe distance). Only trained personnel should approach the scene of an electrical emergency using extreme caution.

⚠ **WARNING**: Attempt to repair the system should only be done by licensed electricians and trained technicians with a proper understanding of the equipment.

EverCharge Equipment Emergency Failure Protocol

- Locate and press the Emergency Stop Button on the EV Charger. Photos below.
- De-energize the main breaker at the main electrical panel and apply a Look Out Tag Out (LOTO) device to ensure the breaker cannot be reenergized.
- If there is any fire, use a CO2 fire extinguisher to put it out. Refer to your site or company's emergency response plans for proper protocol.
- Contact EverCharge Support to review and repair faulty equipment

Important Notes:

⚠ **EverCharge will not be liable for any damages or losses resulting from the customer's failure to follow the warnings or procedures set forth in this guideline.**


EverCharge
POWER
RUNNING
FAULT
EMERGENCY
STOP BUTTON


EverCharge
A
B
EverCharge
POWER
RUNNING
FAULT


POWER
RUNNING
FAULT
EMERGENCY
STOP BUTTON