

SIEMENS

INSTALLATION AND OPERATIONS MANUAL

VersiCharge™ AC

Electric vehicle charging station

April 2023



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FCC Compliance

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 protections against harmful interference in a residential installation. Residential models have 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 protections against harmful interference in a residential installation. Commercial models have 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 protections against harmful interference in a commercial installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, this is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority to operate the equipment and the warranty on the product.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Other Information

Product information is subject to change without notice. All trademarks are recognized as the property of their respective owners.

For Siemens VersiCharge™ Warranty Terms and Conditions, see the Warranty section of this manual.

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SECTION 1

Safety Information

1.1 Read this First

This manual contains instructions for use during the installation, operation and maintenance of the Siemens VersiCharge™ electric vehicle charging station.

1.2 Symbol Legend

To reduce the risk of electrical shock and to ensure the safe installation and operation of the Siemens VersiCharge, the following safety symbols appear throughout this document to indicate dangerous conditions and important safety instructions:



DANGER Hazardous voltage. Will cause death or serious injury. Turn off power before working on this equipment. This indicates a situation where the present voltage can cause injury or death. Extreme caution is required when servicing or installing the equipment referenced.



DANGER Explosion hazard. This equipment has arcing or sparking parts that should not be exposed to flammable vapors. Use extreme caution and follow instructions carefully.



WARNING! This indicates a situation where failure to follow instructions may be a safety hazard or cause equipment malfunction. Use extreme caution and follow instructions carefully.



NOTE: This indicates important information for optimal system operation. Follow instructions closely.



This indicates the connection point for ground conductor.

1.3 Safety Instructions (General and Specific)



DANGER Hazardous voltage. Will cause death or serious injury. Turn off power to this equipment before working inside.

- Read this Installation and Operations Manual in its entirety prior to installing, maintaining, servicing or replacing a Siemens VersiCharge EV Charging System.
- **Permits:** Be aware that many areas require special permits and/or utility approvals to install EV charging equipment. Contact your local electrical inspector's office and your local utility prior to beginning work to understand local requirements.
- **Qualified electrician:** Because of the inherent dangers of electricity, only a qualified electrician should install, maintain, service or replace electrical wiring and connected equipment. For the purpose of this manual, a qualified electrician is someone who is familiar with equipment hazards of installation, construction and operation. In addition, this electrician should meet the definition of a qualified electrician pursuant to the National Electrical Code® (NEC®). Failure to comply with this recommendation may void the VersiCharge warranty.
- **Weatherproof seals:** All VersiCharge units are qualified for outdoor use.



WARNING! Failure to properly seat seals can result in water, debris, and other foreign objects entering the VersiCharge. These can damage electrical components and prevent proper functioning.

1.4 Instructions Pertaining to a Risk of Fire or Electric Shock



WARNING! When using electric products, basic precautions should always be followed. This manual contains important instructions for units supplied with and without a NEMA 6-50 plug that shall be followed during the installation, operation and maintenance of the unit.

- Read all of the instructions before using this product.
- Failure to follow these instructions may lead to death, serious injury or property damage.
- Any electrical wiring required to install this VersiCharge shall conform to applicable codes and standards (ANSI/NFPA 70). A qualified electrician should perform any wiring, maintenance or service.
- To reduce the risk of electric shock, never service, install or uninstall this VersiCharge from service while power is flowing to the unit.
- This equipment has arcing or sparking parts that should not be exposed to flammable vapors. This equipment should be located at least 18 inches above the floor.
- The VersiCharge is equipped with an auto-reset feature.
 - If this VersiCharge is connected to a vehicle at the time that power is restored following an outage, charging may resume automatically.
 - If this VersiCharge is connected to a vehicle and a ground fault trip occurs, charging may resume automatically after a delay period.
- Do not put fingers into the electric vehicle connector plug.
- Do not use this product if the flexible power cord or EV cable is frayed, has broken insulation or has any other signs of damage.
- Do not use this product if the enclosure or the EV connector is broken, cracked, open or shows any other indication of damage.
- A torque driver shall be used to make power connections to ensure that adequate contact pressure is applied. See the Installation section of this manual for additional details.
- When a VersiCharge is hardwired during installation, power connections shall be made at line terminals with a 14.5 in-lb. torque driver.
- A VersiCharge charging station includes wire connector instructions for field installed wiring. Instructions included in this manual must be followed to ensure proper installation.
- An insulated grounding conductor that is identical in size, insulation material and thickness to the grounded and ungrounded branch circuit supply conductors, except that it is green with or without one or more yellow stripes, shall be installed as part of the branch circuit that supplies the VersiCharge or system.
- The grounding conductor shall be grounded to earth at the service equipment or (when supplied by a separately derived system) at the supply transformer.
- Do not attempt to operate this VersiCharge if the ambient temperature is greater than 50 °C (122 °F).
- #6 90 °C copper wire should be used for a 48 A charger and #8 90 °C copper wire should be used for a 40 A charger.
NOTE: 1. Wire must have a temperature rating of 90 °C or higher. 2. Do not set the amp switch higher than 40 A (amp switch setting #4) unless hardwired to a dedicated 60 A branch protection circuit breaker (48 A units should be set to amp switch setting #5).

- **CAUTION:** To reduce the risk of fire, connect only to a circuit provided with 50/60 amperes maximum branch circuit overcurrent protection in accordance with the ANSI/NFPA 70 National Electrical Code™.

1.5 Code and Standard References

- This VersiCharge has been designated to meet the requirements in section 626 of the National Electric Code (NEC®).
- UL Listing with Listing Number – Siemens VersiCharge devices are listed in UL file #E348556.
- Complies with the following UL Standards: UL 1998, UL 991, UL2594/CSA C22.2 No.280/NMX-J-677-ANCE, UL 2231-1/CSA C22.2 No.281.1/NMX-J-668-1, UL 2231-2/CSA C22.2 No.281.2/NMX-J-668/2-ANCE and UL 2251/CSA C22.2 No.282/NMX-J-678-ANCE.
- EV interface compliant to SAE J-1772 Level II.
- The residential models have 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 in a residential installation. The commercial models have 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 to radio communications if not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.
- Personal Protection Equipment: Use of proper personal protection equipment, including, but not limited to, eye protection, shock protection, gloves and other appropriate protection, is recommended when installing or servicing any electrical equipment.
- Charging Circuit Interrupting Device (CCID): The Siemens VersiCharge line of EV Charging Systems includes a CCID. The CCID is required by UL Standard 2231 and is designed to detect ground faults within the system and disconnect power from the downstream conductors when a fault is detected.



DANGER Explosion hazard. This equipment has arcing or sparking parts that should not be exposed to flammable vapors. This equipment should be installed at least 18 inches above floor or ground level. Use extreme caution and follow instructions carefully.

- Arcing component in contactor: Siemens VersiCharge EV Charging Systems include a contactor that when opened or closed will cause a short duration arc. The contactor is enclosed in an appropriate electrical enclosure but if an arc occurs in the presence of flammable vapors, the vapors could ignite, creating an explosion. Store flammable vapors away from all electrical equipment and if vapors are present allow sufficient time for ventilation before operating this equipment.

1.6 Product Labels

The following symbols appear on the product label and are described here:



This label indicates the risk of hazardous voltage and electric shock which will cause death, serious injury or substantial damage. Turn off the power supplying this VersiCharge before working inside.



Explosion hazard. This equipment has arcing or sparking parts that should not be exposed to flammable vapors. Use extreme caution and follow instructions carefully.



This indicates the connection point for ground conductor.

1.7 Definitions

The abbreviation EV used in this manual refers to an electric vehicle. The abbreviation AC used in this manual refers to alternating current.

SECTION 2

Mounting Instructions

Visit usa.siemens.com/versicharge for additional manuals and information.

2.1 Equipment List

2.1.1 Kit-Supplied Equipment

- 1 – VersiCharge (with optional NEMA 6-50 infrastructure plug for 40 A residential units only)
- 1 – Mounting bracket
- 1 – Cable holster
- 1 – Ferrite core
NOTE: Plug-supplied units (40 A) will have the ferrite core factory installed. Only units to be hardwired (48 A) will install the ferrite core.
- 1 – Multi-use connector (this connector is used to connect both the Modbus and the External Remote Control Interface Connector)
NOTE: Supplied with commercial units only.
- RFID Cards: two admin cards and five user cards (supplied with commercial units only)
- 1 – Tamper-resistant 5/32" Allen wrench (for securing the charger)
- 1 – #8 x 2-1/2" flathead drywall screw (for securing the holster to the wall stud)
- 2 – Lag screws, hex head screws, 1/4 x 2" (for securing the mounting bracket to the wall studs)
- 2 – #10-32 X 3/8", tamper-resistant, pin-in-hex socket button head cap screw (for securing the charger)

2.1.2 Standard Installation Equipment

- Qualified electrician
- Cordless drill (Phillips bit with extender) – include 1/8" drill bit for pilot holes
- Stud finder
- 240 V AC voltmeter
- A 40 A charger requires a 2-pole, 240 V, 50 A circuit breaker. A 48 A charger requires a 2-pole, 240 V, 60 A circuit breaker.
- NEMA 6-50 outlet (if not hardwiring charger)
NOTE: Only used with the 40 A residential charger.
- 7/16" socket wrench
- Flathead screwdriver
NOTE: If using the wallboard mounting (alternate mounting) for the charger, a Phillips head screwdriver will also be needed.
- Tamper-resistant 5/32" hex bit with a 1/4" Allen wrench (for securing the charger)
- If hardwiring the charger – #6 AWG 90 °C copper wire, three conductors – #6 AWG 90 °C copper wire should be used for a 48 A charger, and #8 AWG 90 °C copper wire should be used for a 40 A charger.
NOTE: 1. Wire must have a temperature rating of 90 °C or higher. 2. Do not set the amp switch higher than 40 A unless hardwired to a dedicated 60 A circuit according to national and local codes.

2.1.3 Alternate Installation Equipment (Screws and anchors are not included in the VersiCharge kit)

- 5 – #12 x 1-1/2" LG Phillips head Ø.375 head minimum, with five #12 wall anchors
NOTE: wall anchors must be rated for 61 lbs. for 1/2" dry wall.

2.2 Mounting Using a Stud – Recommended Stud Mounting (use center-top and bottom holes)

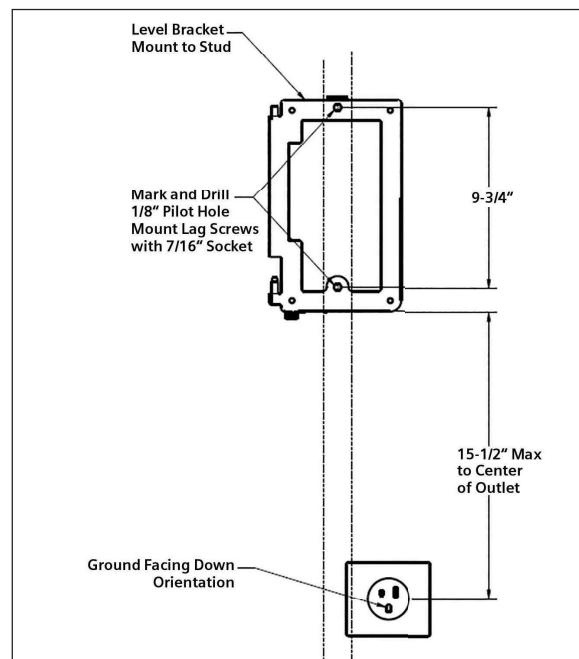


Figure 1. Align the mounting bracket and screw into the stud



NOTE: For installation, the mounting-bracket hinges will be pointing to the ceiling and the flat side of the bracket will be against the wall.

1. Locate a stud within the wall that can handle the 17+ lb. load of the VersiCharge.
2. Place the mounting bracket no more than 12" above a 240 V outlet; level the mounting bracket and drill the center-top hole using a drill with an extender.
3. Mount the bracket using the top hole and the lag screws, **do not** tighten all the way.
4. Level the bracket.
5. Drill a pilot hole for the center-bottom hole.
6. Secure with lag screws.
7. Tighten the top and bottom screws securely using an Allen wrench.
 - For concrete cinder block walls, install appropriate anchors. If using an existing outlet, ensure that the power cord will reach to the outlet. Using a 7/16" socket, attach the mounting bracket to the wall in compliance with NEC® and local jurisdiction requirements, using the two lag screws provided.
 - For Siemens post installation, see the post instruction manual at usa.siemens.com/versichargecommercial.

2.3 Alternate Mounting - Wallboard Mounting (use mounting holes on four corners)

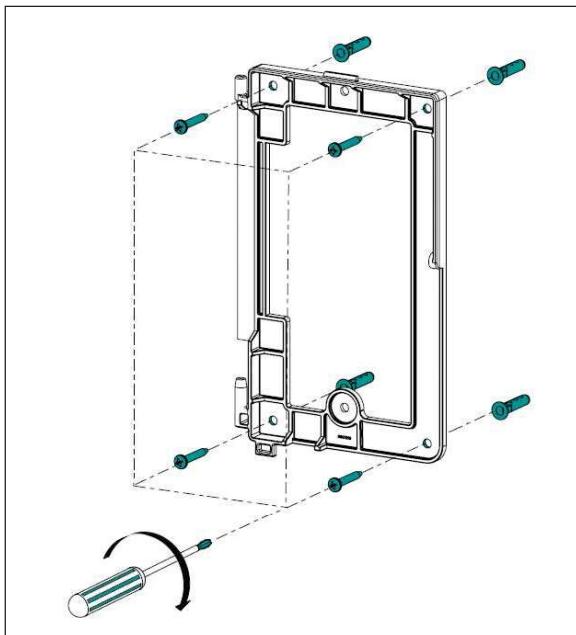


Figure 2. Alternate installation of the VersiCharge mounting



NOTE: For installation, the mounting-bracket hinges will be pointing to the ceiling and the flat side of the bracket will be against the wall.



NOTE: The VersiCharge can be mounted using 5 #12 x 1-1/2 LG Phillips head 0.375 head minimum with five #10 wall anchors.



NOTE: Recommended - The five anchors must be at least 61-lb. anchors rated for 1/2" dry wall.
(Screws and anchors are not included in the kit)

1. Locate the mounting bracket no more than 12" above a 240 V outlet or if hardwiring, the wiring will come through the bottom of the charger.
2. Level the mounting bracket and drill four holes, one in each corner of the bracket.
3. Place the anchors into the wallboard until they are flush with the wall.
4. Place the mounting bracket over the holes (with the hinges facing upward and the flat side of the bracket against the wall) with the anchors and securely screw the mounting to the wall.
5. Add a fifth hole for mounting the holster once the unit is mounted on the wall. Place the holster on the wall and mark the correct position for the hole. See Section 2.5 and its graphic.

2.4 Install VersiCharge

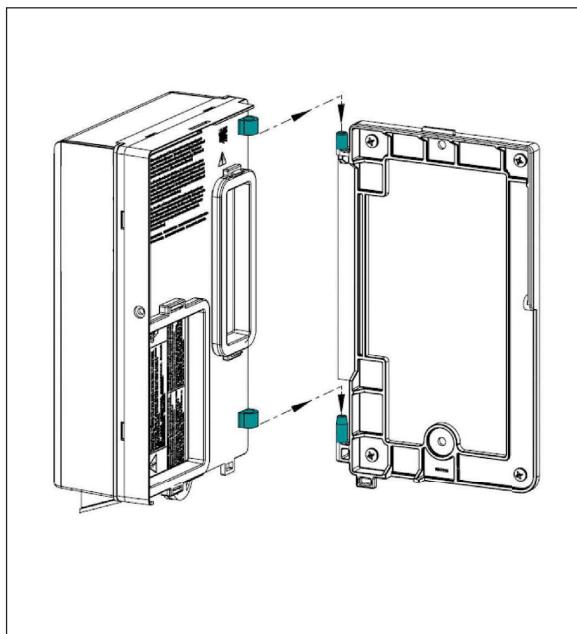


Figure 3. Slide the VersiCharge onto the mounting hinges



NOTE: For installation, the mounting bracket hinges will be pointing to the ceiling and the flat side of the bracket will be against the wall.

1. If hardwiring the unit, see the Hardwire Installation section of this manual.
2. Slide the VersiCharge on to the hinges.
3. Rotate to the right until the unit clicks and is closed.
4. Secure the enclosure with the locking mechanism after installing the holster and plug the VersiCharge into the 240 V outlet.

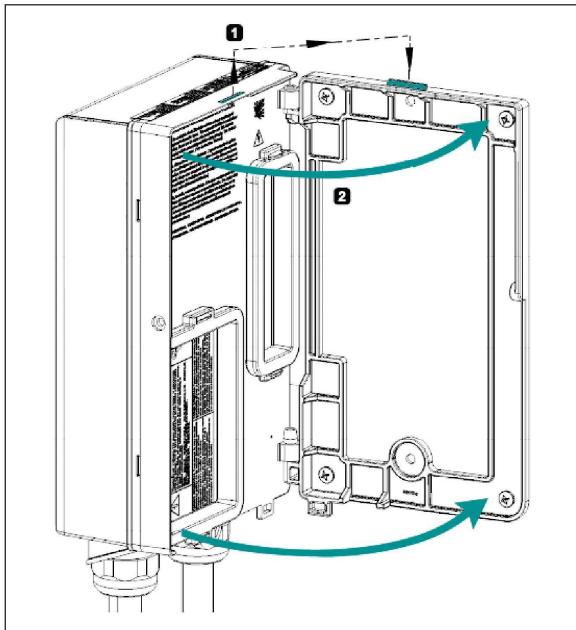


Figure 4. Close the VersiCharge

2.5 Secure Charger and Install Cable Holster

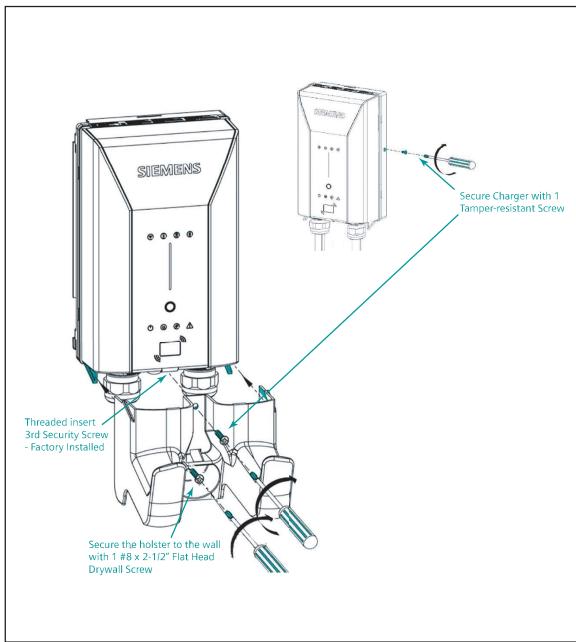


Figure 5. Secure the charger and mount the holster

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1. Secure charger to mounting bracket: Using the kit-supplied, tamper-resistant screw, secure the charger cover with one screw on the side.
2. Install holster to charger: Align the holster with guides in the charger and drill the pilot hole. Using the kit-supplied, tamper-resistant screw, use the third screw to secure the holster to the charger (the hole at the top of the holster).
3. Standard installation (Figure 5): Drill pilot holes and use the kit-supplied lag screw (#8 x 2-1/2" drywall screw) to secure the holster to the wall stud.
4. Alternate installation (Figure 2, Section 2.3): Drill pilot holes and use the fifth wallboard screw with anchor to screw into the wall.

2.6 Check the System

1. Turn the power on; the white Power Available light should illuminate. If it does not, verify that the outlet or wire is putting out 240 V or 208 V using the voltmeter.

2. With the Power Available light on, plug the Electric Vehicle Supply Equipment (EVSE) cable into the car. If you have any fault lights, please see the LED Light Display table in Section 8.1.

Siemens Sifinity Go mobile app (for installations with 10 or less chargers per account). Download the Sifinity Go mobile app to your smartphone to get started using your charger. Find these applications at either [Google Play Store](#) or [Apple App Store](#).

Siemens Configuration Tool (best used when configuring multiple chargers per account): Download the VersiCharge Configuration Tool (PC App) at usa.siemens.com/versichargecommercial. Unzip the tool to a PC and install by following the screens. This tool will allow charger management from a PC.



WARNING! Do not force the connector into the receiver on the vehicle. If the connection between the receiver and connector shows any resistance, inspect the pins in each. If damage is found, call a qualified service person.

SECTION 3

For Professional Electricians

3.1 Outlet Installation Instructions (Skip if Using an Existing Outlet)



DANGER Hazardous voltage. Will cause death, serious injury or substantial property damage. Turn off power supplying equipment before working inside the unit.



DANGER! Any time the interior wiring is exposed while there is power to the unit, there is danger of hazardous voltage and serious injury.



NOTE: Any electrical wiring required to install this VersiCharge shall conform to applicable codes and standards (ANSI/NFPA 70). A qualified electrician is recommended to perform these tasks.



NOTE: Please consider your planned installation location for the mounting bracket when choosing the location to which you will run the wire.



NOTE: Electrical outlets must be installed in accordance with appropriate NEC® and AHJ requirements. Please note that the outlet orientation required for proper installation of the VersiCharge product is per the illustration below.

1. A qualified electrician should install the outlet with the ground facing down (only the 40 A charger is available with a plug; the 48 A charger MUST be hardwired). See Section 2.2, Figure 1, for outlet positioning.

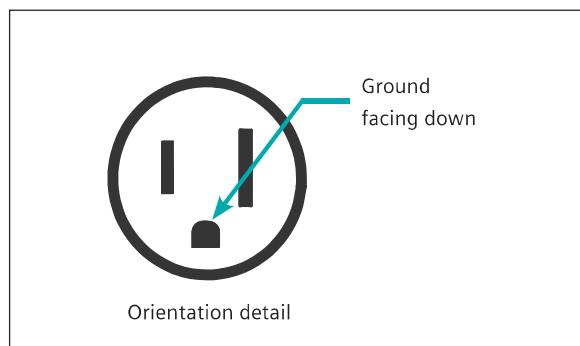


Figure 6. Outlet ground facing down



WARNING! When installed outdoors, cord-and-plug installations require a NEMA outdoor rated receptacle and enclosure due to the risk of moisture. Installing outdoors without properly rated outdoor receptacles and enclosures will void the VersiCharge warranty.

3.1.1 Removing the Cord-and-Plug Assembly for Hardwiring (Only for the Plug-Supplied 40 A Units)

Plug removal is only for the plug-supplied 40 A units; 48 A units must be hardwired. See steps 6-13 below for hardwiring instructions.



NOTE: The rating of the circuit breaker that will be required is based on the ampere rating of the EVSE; 40 A requires a 50 A breaker, and 48A requires a 60 A breaker.