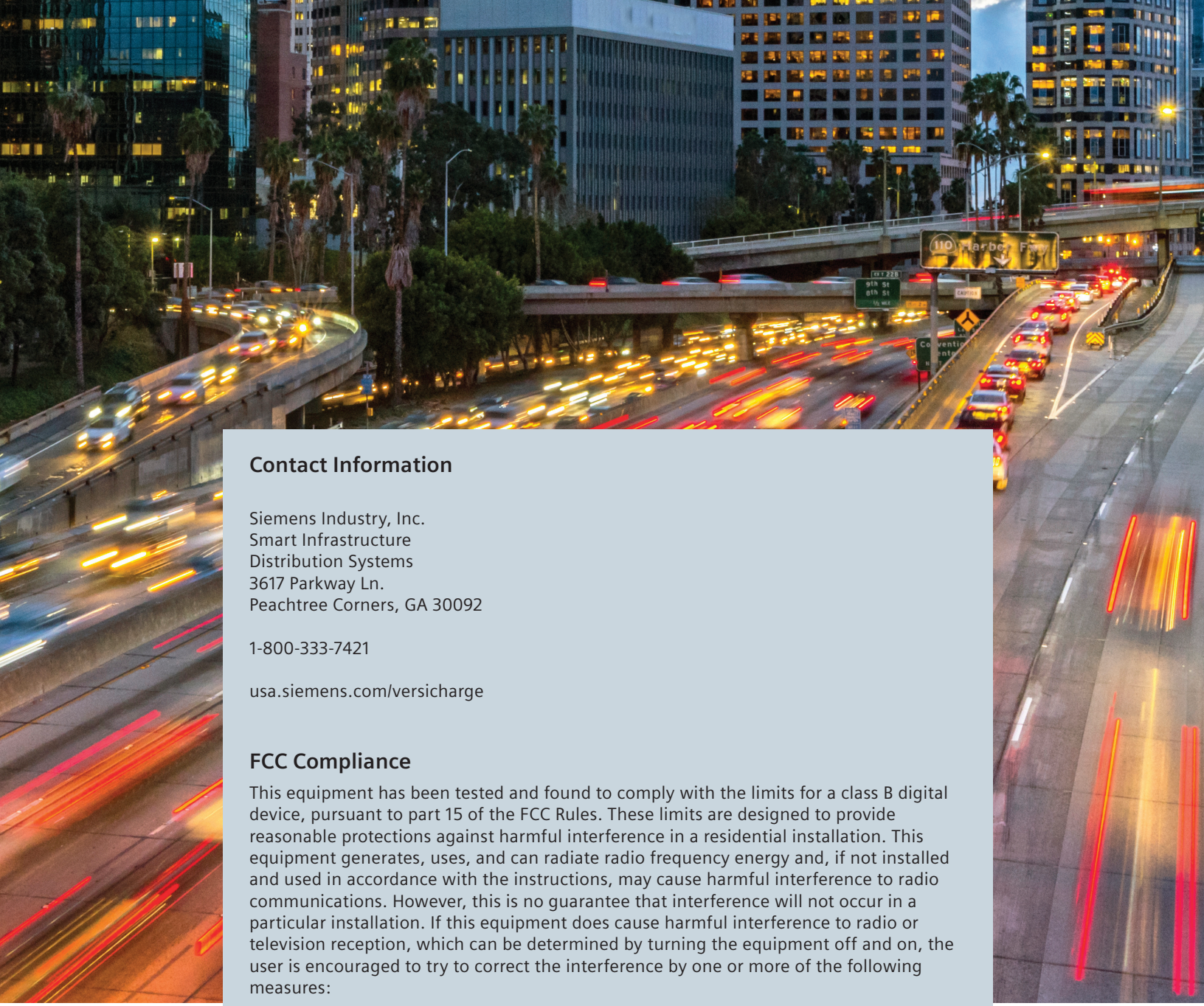
SIEMENS

Installation and Operations Manual

VersiCharge™ AC

Electric vehicle charging station

usa.siemens.com/versicharge



Contact Information

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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. 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:

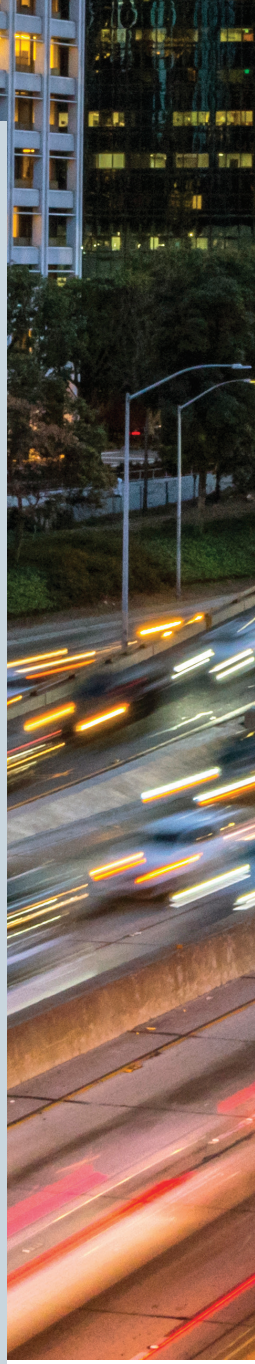
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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.

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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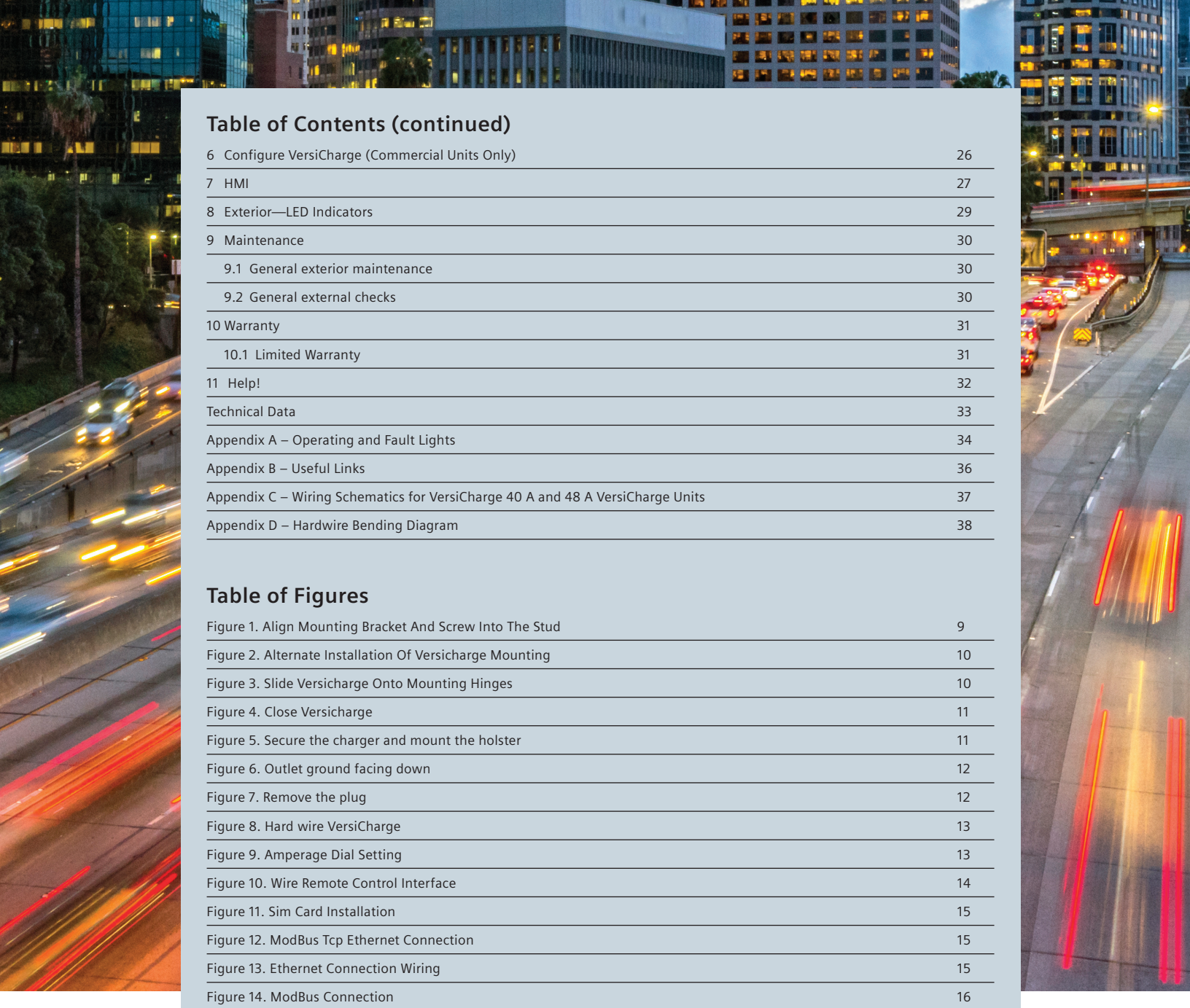

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1: Safety Information

1.1 Read this First

This manual contains important instructions for use during 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 could 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 information particularly important for optimal system operation. Follow instructions closely.

Indicates connection point for ground conductor.

1.3 Safety Instructions (General and Specific)

DANGER Hazardous voltage. Will cause death or serious injury. Turn off power supplying 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 the recommendation of having a qualified electrician install the unit when electrical work is required may void the warranty provided with this VersiCharge.
- **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, including the following. This manual contains important instructions for units supplied with and without a NEMA 6-50 plug that shall be followed during 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 is recommended to perform these tasks.
- 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.
- The VersiCharge should be supervised when used around children.
- Do not put fingers into the electric vehicle connector.
- Do not use this product if the flexible power cord or EV cable is frayed, has broken insulation, or 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.
- A VersiCharge charging station includes wire connector instructions for field installed wiring. Special instructions included in this manual must be followed to ensure proper installation.
- When a VersiCharge is hardwired during installation, power connections shall be made at line terminals with 14.5 in-lb. torque driver.
- 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 75C copper wire should be used for 48 A charger and #8 75C copper wire should be used for a 40A charger. NOTE: 1. Wire must have a temperature rating of 75C or higher). 2. Do not set the amp switch higher than 40A unless hardwired to a dedicated 60A branch protection circuit breaker.
- 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, UL 2251/CSA C22.2 No.282/NMX-J-678-ANCE.
- EV interface compliant to SAE J-1772 Level II.
- 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 in a residential 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, 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 Charging Circuit Interrupting Device (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, should vapors be 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 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.

Indicates connection point for Ground conductor.

1.7 Definitions

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

2: Mounting Instructions (See also VersiCharge Quick Start Guide at usa.siemens.com/versicharge)

2.1 Equipment List

2.1.1 Kit Supplied Equipment

- 1 – VersiCharge (with optional NEMA 6-50 infrastructure plug for Residential Units only)
- 1 – Mounting Bracket
- 1 – Cable Holster
- 1 - Ferrite Core
- 1 – ModBus Connector
- RFID Cards: 2 Admin Cards and 5 User cards
- 1 – Tamper resistant 5/32" Allen wrench (secure the charger)
- 1 – #8 x 2-1/2" Flat Head 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)
- 3 – #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 (Recommended)
- Cordless Drill (Phillips Bit with extender)
- Stud Finder
- 240 V AC Voltmeter
- 40A charger requires a 2-pole, 240V, 50A circuit breaker. 48A charger requires a 2-pole, 240V, 60A circuit breaker.
- NEMA 6-50 Outlet (if not hardwiring charger)
- 7/16" socket wrench
- Screwdriver
- Tamper resistant 5/32" Hex Bit with ¼" Allen wrench (secure the charger)
- If using a 240V outlet – NEMA 6-50 Outlet (Only used for the 40A charger P/Ns 8EM1312-4AF10-0AA3, 8EM1312-4CF18-0FA3.)
- If hardwiring charger – #6 copper wire, 3 conductors – #6 75C copper wire should be used for 48A charger and #8 75C copper wire should be used for a 40A charger. NOTE: 1. Wire must have a temperature rating of 75C or higher). 2. Do not set the amp switch higher than 40A unless hardwired to a dedicated 60A 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 1-½ LG Phillips head Ø.375 head minimum, with 5 – #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)

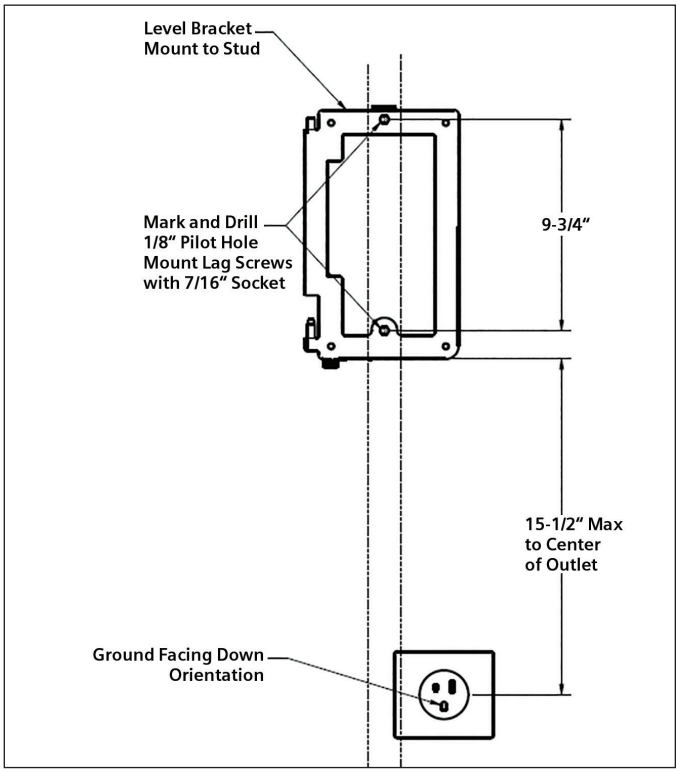


Figure 1. Align mounting bracket and screw into the stud

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 not 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. Secure the mounting bracket with the kit-supplied screws.

4. Drill the bottom hole using the bottom-center mounting hole as a guide.

5. Secure with the kit-supplied screw.

6. Tighten both top and bottom screws securely.
   - For concrete cinder block walls, install appropriate anchors. If using an existing outlet, ensure that power cord will reach to the outlet. Using a 7/16" socket, attach mounting bracket to wall in compliance with all National Electrical Code® (NEC) and local jurisdiction requirements, using the 2 lag screws provided.

2.3 Alternate mounting – Wallboard mounting (Use mounting holes on 4 corners)

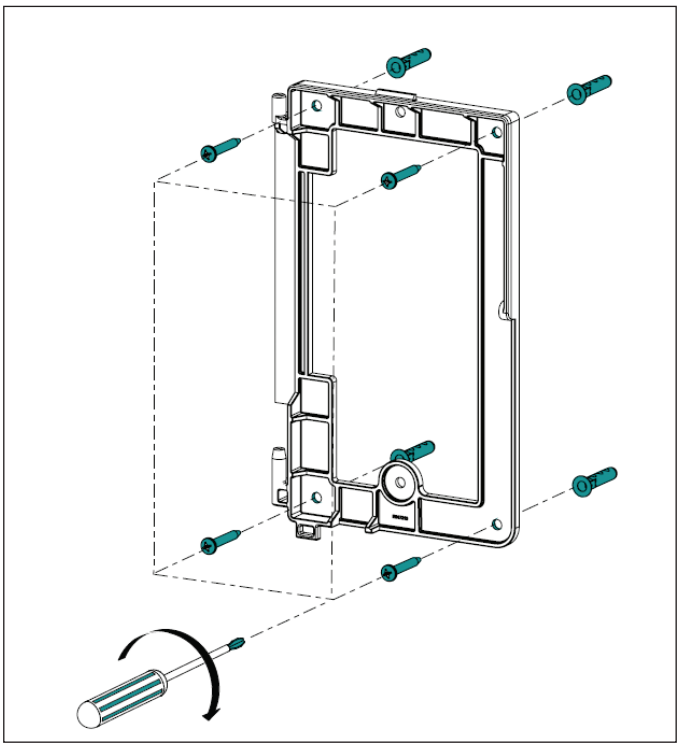


Figure 2. Alternate installation of VersiCharge mounting

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 1-½ LG Phillips head 0.375 head minimum with 5 #10 wall anchors

NOTE: Recommended - The 5 anchors must be at least 61lb. anchors rated for 1/2" dry wall. **(SCREWS AND ANCHORS NOT INCLUDED IN KIT.)**

1. Locate the mounting bracket not 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 4 holes, one in each corner of the bracket.
3. Place anchors into the wallboard until they are flush with the wall.
4. Place the mounting bracket over the holes (hinges facing upward, flat side of the bracket against the wall) with the anchors and screw the mounting to the wall securely.
5. Add a 5th 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. Refer to Section 2.5 and its graphic.

2.4 Install VersiCharge

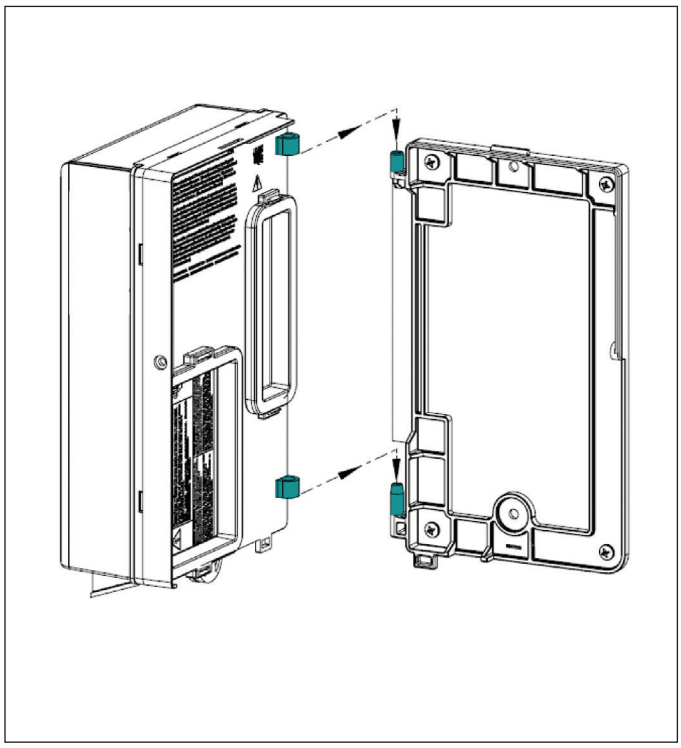


Figure 3. Slide VersiCharge onto mounting hinges

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 Hardwire Installation.
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.

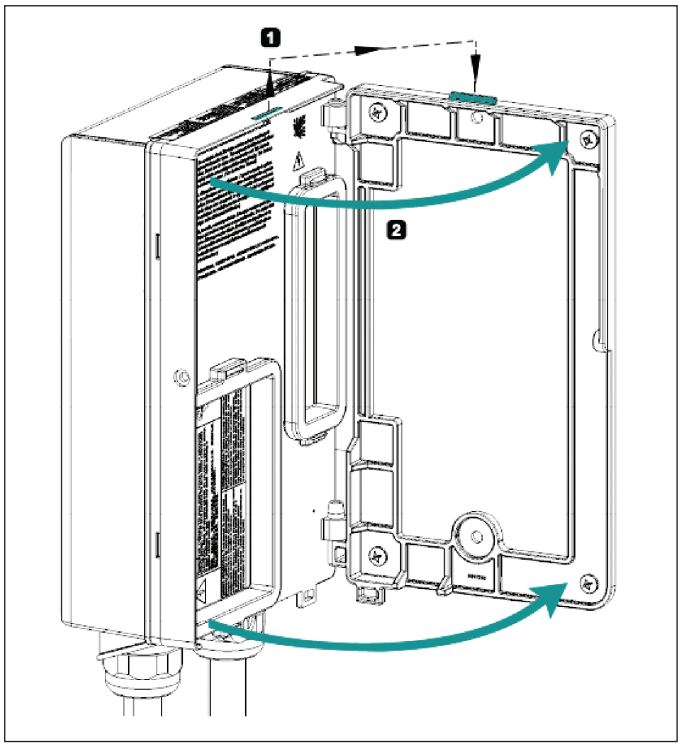


Figure 4. Close VersiCharge

2.5 Secure Charger and Install cable holster

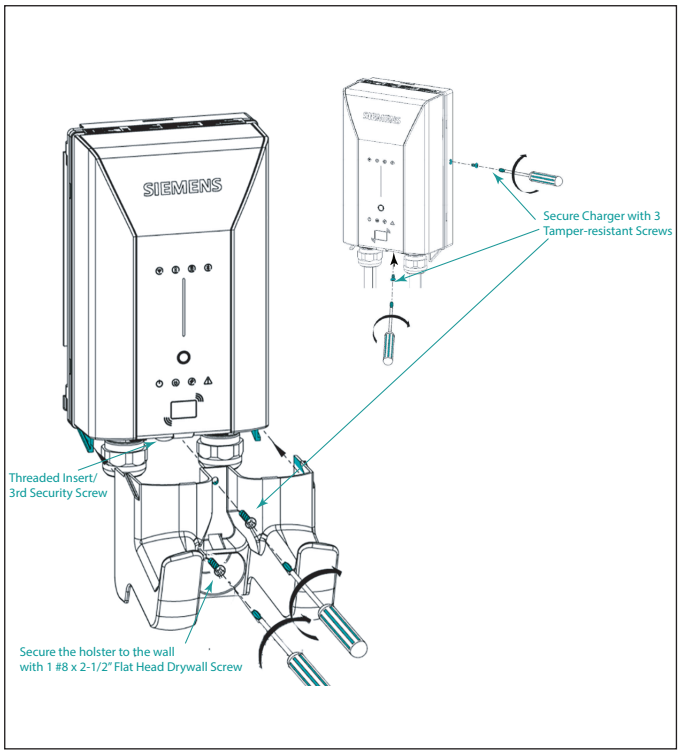


Figure 5. Secure the charger and mount the holster

1. Secure Charger to Mounting Bracket: Using the kit-supplied tamper-resistant screw– secure the charger cover with one screw on the side. Use the second screw (underneath the charger) to secure Front Cover to the Charger.
2. Install Holster to Charger: Align Holster with guides in charger. Using the kit-supplied tamper-resistant screw, use the third screw to secure the holster to the charger (hole at the top of the holster).

Standard installation – using the kit-supplied lag screw, screw into the wall.

Alternate installation – using the 5th wallboard screw with anchor, 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 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 Operating/Faults Table in Appendix A.

Siemens VersiCharge Mobile App (Residential Chargers Only): Download the VersiCharge mobile app to your smartphone to get started using your charger. Find these applications at either Google Play (https://play.google.com/store), or iOS stores (https://www.apple.com/ios/app-store/).

Siemens Configuration Tool (Commercial Chargers Only): Download the VersiCharge Configuration Tool (PC App) at usa.siemens.com/versicharge. 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 and, if damage is found, call a qualified service person.

3: For Professional Electricians

3.1 Outlet Installation Instructions

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 receptacle 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 40A charger is available with a plug, the 48A charger MUST be hardwired). See Section 2.2, Figure 1, for outlet positioning.

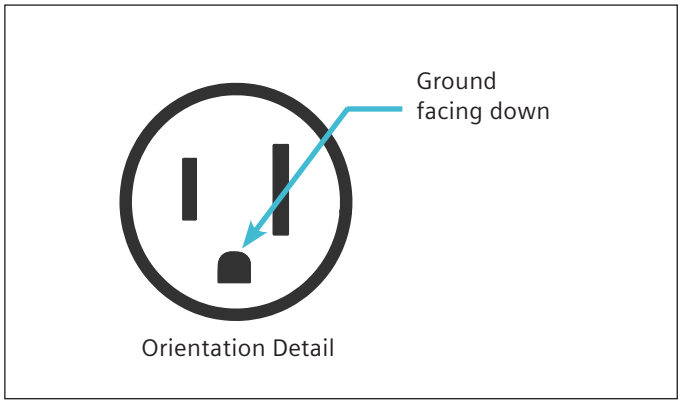


Figure 6. Outlet ground facing down

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 violate listings and void the VersiCharge warranty.

3.1.1 Removing the Cord-and-Plug Assembly (Only for the plug-supplied 40A Units)

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

NOTE: Plug removal is only necessary when hardwiring VersiCharge.

NOTE: This enclosure has not been evaluated for rigid metallic and rigid non-metallic conduit. In order to maintain a Type 4 UL50E environmental rating, a hardwired installation should use liquid tight flexible conduit only, with conduit glands rated UL Type 4, 4X, 6 or 6P.

NOTE: Use flexible conduit only.

1. **VersiCharge will need to be mounted on the bracket to hardwire the device.** Open hinged cover by loosening four cover Phillips screws.
2. Remove barrier by removing the two securing screws.

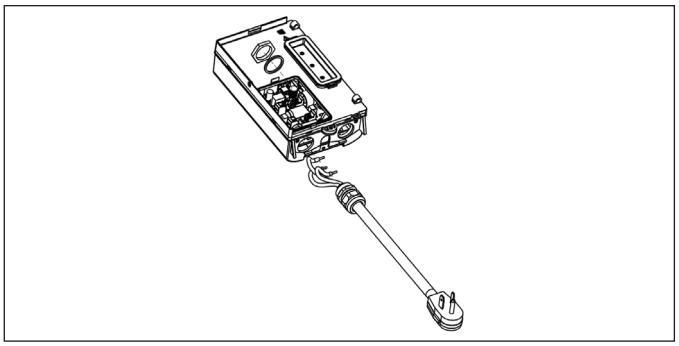


Figure 7. Remove the plug

3. Disconnect the attachment plug wires from the terminal block by loosening screws in positions 1, 2, and 3 and remove the Ferrite core (the core will be reinstalled when hardwired).
4. Do not adjust the two lugs of the pre-installed wiring. These are for factory use only.
5. Disconnect and remove strain relief and entire cord-and-plug assembly.
6. Route conductors into the VersiCharge from the conductor opening with proper strain relief.
7. Pull 3-6 inches of slack through the conductor opening.
8. Slide the Ferrite core over the black and red wires ONLY, and into position per figure 9 (the green wire/ground should not be placed through the Ferrite core).
9. Wire conductors (copper only) into VersiCharge (L1, L2 and Ground) from connected conduit. Using torque screwdriver, torque all lugs to 14.5 lb.-in. See Appendix D for wire bending diagram.

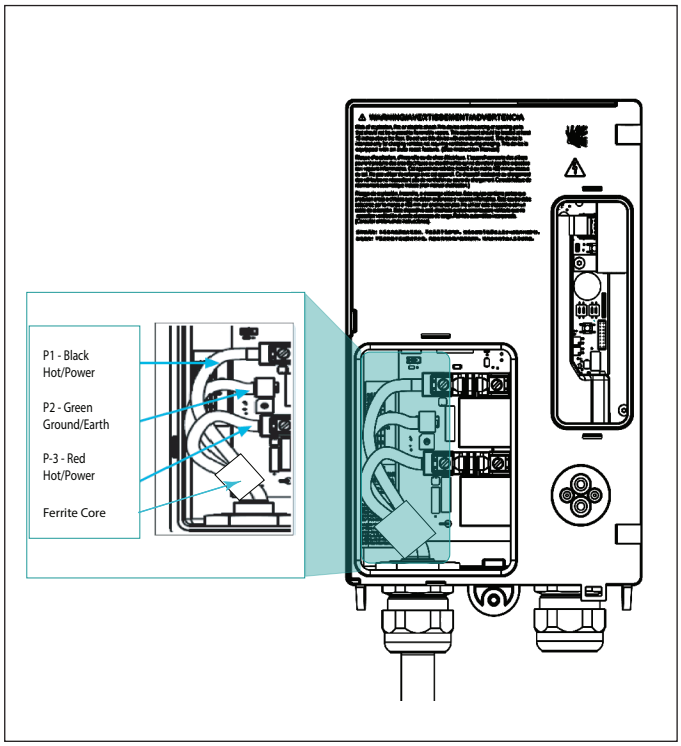


Figure 8. Hard wire VersiCharge

11. Replace barrier and secure with the two screws which were removed in the beginning.
12. Replace hinged cover, securing with four Phillips head screws. Swing the unit closed until the bracket clip engages and secure the charger with the tamper-resistant security screws.
13. Turn the circuit breaker for this circuit to the 'ON' position.

3.2 Amperage Adjustment

DANGER Hazardous voltage. Will cause death, serious injury. Turn off power before working on this equipment.

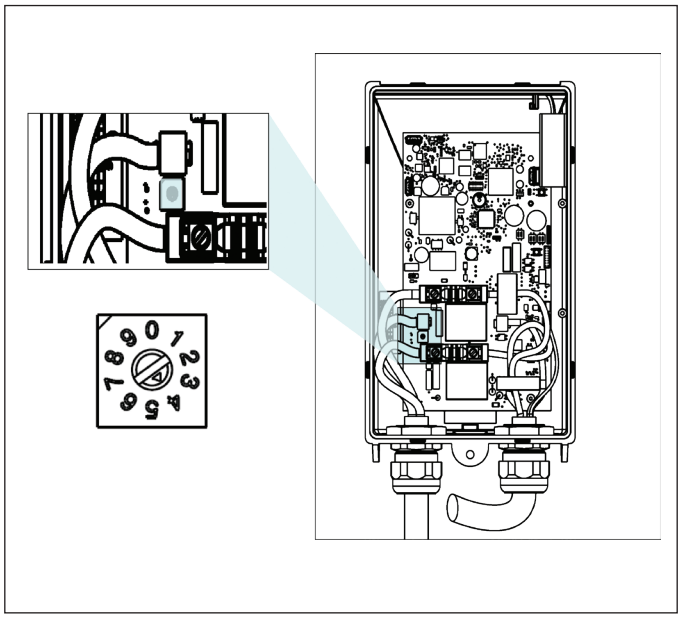


Figure 9. Amperage dial setting

The VersiCharge has the option to set the maximum amperage/ power that the car may draw using the Amperage Adjustment dial.

NOTE: The VersiCharge cannot control the power draw to the EV, it can only communicate the current capacity to the VersiCharge to the EV.

3.2.1 Dial Settings

NOTE: The Amperage Adjustment dial is for use by a qualified technician/electrician only.

- When changing the Amperage Adjustment dial, verify that the VersiCharge is disconnected from power.

Amperage Settings

Switch Position	Amperage
0	12
1	16
2	24
3	32
4	40
5	48

Settings: 0 - 4 amperage adjustment settings are used for the 40 amp charger (note: the #5 position will cause a bad switch fault for the 40 amp charger) and 0 - 5 amperage adjustment settings are used for the 48 amp charger. Setting the amperage adjustment higher than 5 will result in a fault.

- The purpose of the Amperage Adjustment dial is to set the maximum current that the EV is allowed to draw from the charging stations.
- The dial has 10 settings.
- Settings 0-5 are for amperage adjustments.
- ***Settings 6-9 are for factory use only.*** These settings will result in a bad switch fault if used.

3.2.2 Circuit Requirements

- The circuit must be sized for the maximum ampere requirement. Do not derate breakers or conductors based on amperage adjustment.

3.3 Remote Control Interface - Part Numbers 8EM1312-4CF18-0FA3, 8EM1312-5CF18-0FA3, 8EM1310-4CF14-0GA0, 8EM1310-5CF14-0GA0, 8EM1310-4CF14-1GA1, 8EM1310-5CF14-1GA1

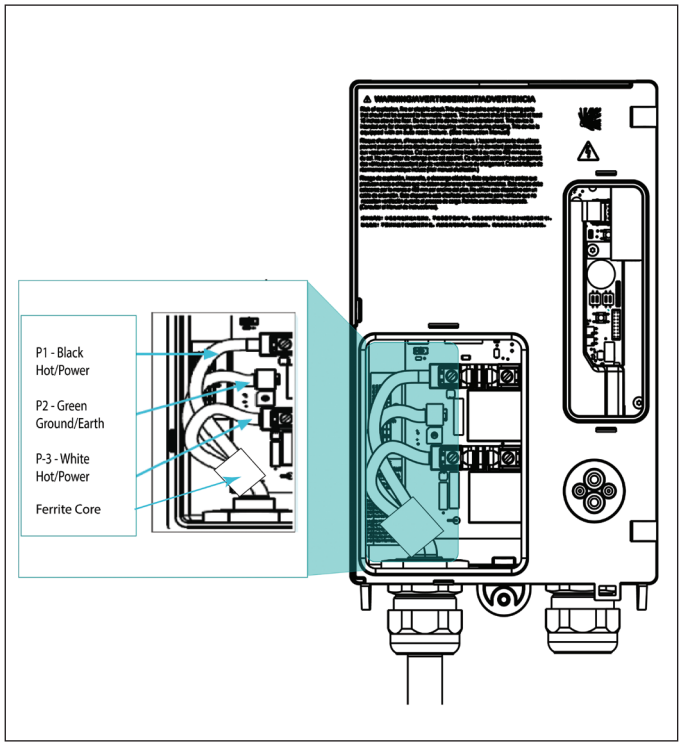


Figure 10. Wire remote control interface

WARNING! Remote Control Interface should be low-voltage, control wiring. Installing higher voltage on this interface can cause damage to unit, preventing it from functioning properly. Do not hook up 120/240 V to these connections.

The Siemens VersiCharge has a Remote Control Interface that can also be used to wire the Remote Control Interface to pins #7 and #9, and allows charging to be controlled by an external device. Examples include demand response switches, building automation systems, digital sensors, etc.

- Control Switch input is a dry contact input from an external source.
- Status Output indicates the charging status of the VersiCharge.
- The Remote Control Interface is located inside the unit so, to connect a VersiCharge the unit has to be opened by taking the following steps:

Pin	Label	Description
7	Utility_1	Utility lockout (dry contact input; locked when closed)
9	Utility_2	

1. Remove the Multi-use Connector from the bag and wire an additional remote control interface cable to pins #7 and #9.

NOTE: The Remote Control Interface cable is not supplied as part of the in-box equipment.

2. Open hinged cover by loosening four cover Phillips closure screws.
3. Remove barrier by removing the two securing screws.
4. Connect to the Multi-use connector by gently pressing the connector on to it.
5. Press the Remote Control cable through the rubberized gland at the back of the unit without the connector attached. This gland will self-seal.

NOTE: Do not press the cable with the connector attached through this gland, that will cause the loss of the NEMA 4 rating.

6. Attach the Remote Control cable connector and attach the two cable connectors.
7. Gently tuck the cables into the back of the unit and close the case.

NOTE: When the external contact is closed, the alternate input will control the VersiCharge, preventing it from entering the 'Charging' state.

NOTE: The status output is a switch that indicates charging status. When the contacts are closed, the unit is in charging state.

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 the floor or ground level. Use extreme caution and follow instructions carefully.

3.4 SIM Card Installation – Part Numbers 8EM1310-4CF14-1GA1, 8EM1310-5CF14-1GA1

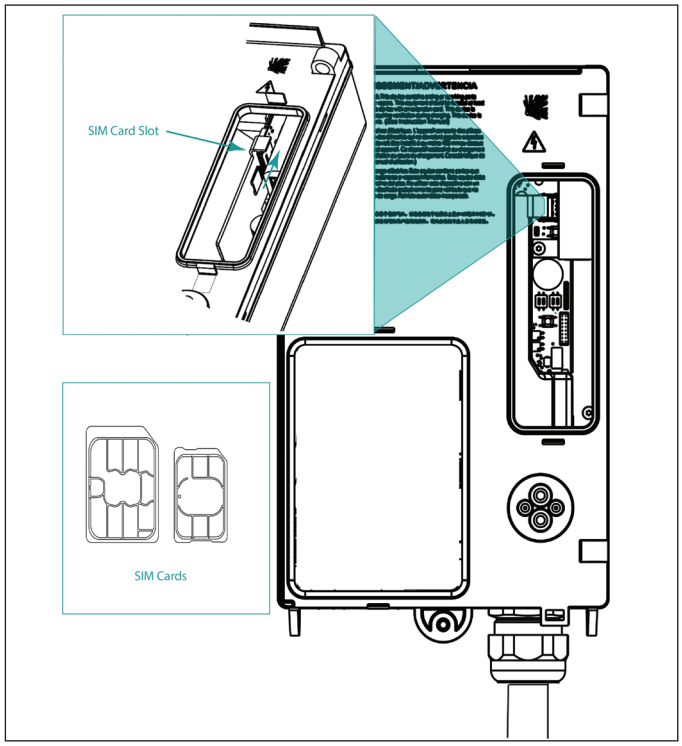


Figure 11. Sim card installation

This hardware uses a micro SIM card, but with an adapter will allow nano SIM cards.

The SIM card should NOT require a PIN. Locked SIM cards are not supported by VersiCharge hardware.

The following carriers are supported : AT&T, T-Mobile, and Rogers. Data plans should have a minimum consumption of 250 MB per month per charger.

1. Expose the area holding the SIM card hardware by unlatching the cover. The SIM card sits next to the Ethernet connection (see Figure 12 Sim card installation).
2. Slide the micro SIM card into slot.
3. The SIM card socket is spring loaded. Slide the SIM card from the bottom upward into the slot until it stays in place. To remove/replace the SIM card, press the SIM card upward and it will “spring” down and out of the slot.

3.5 Ethernet Connection – Part Numbers 8EM1312-4CF18-0FA3, 8EM1312-5CF18-0FA3, 8EM1310-4CF14-0GA0, 8EM1310-5CF14-0GA0, 8EM1310-4CF14-1GA1, 8EM1310-5CF14-1GA1

There is an Ethernet port standard on the VersiCharge controller module 10/100BASE-T port with an RJ45 modular connector. The Ethernet port is capable of data rates up to 100 Mbps and supports ModBus/TCP protocol. Both the Ethernet and ModBus can be used to commission chargers and monitor charger activity on a daily basis (download the VersiCharge Configuration Tool (PC application) at usa.siemens.com/versicharge).

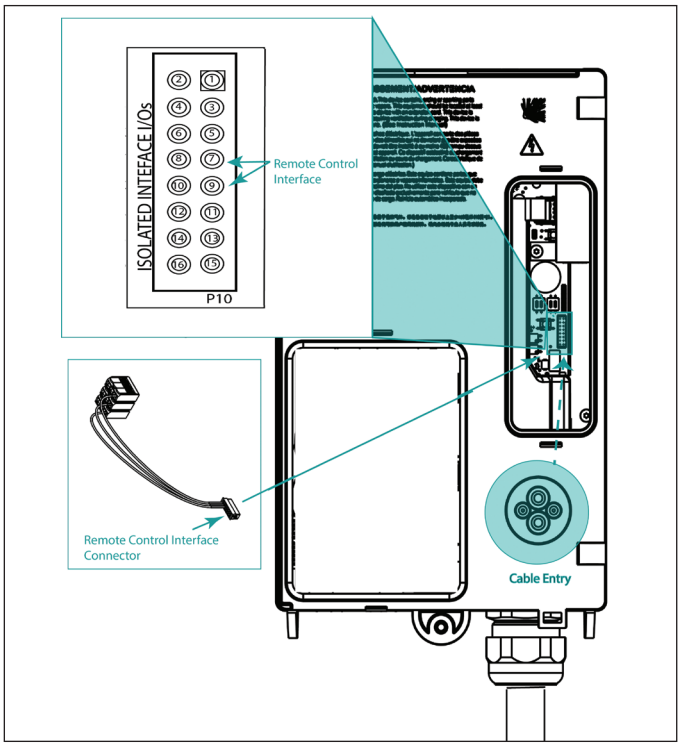


Figure 12. ModBus TCP Ethernet connection

NOTE: The Ethernet cable connector should NOT be attached to the Ethernet cable when it is pushed through the rubberized Ethernet gland. This gland will not self-seal if the Ethernet connector is pushed through the rubberized Ethernet gland and the NEMA 4 rating will be lost.

1. Push the Ethernet cable through the rubberized Ethernet gland.
2. Snake the Ethernet cable up through the back to the opening.
3. Connect the Ethernet connector to the cable.
4. Insert the connector from the bottom up into the Ethernet port.

3.6 Ethernet Connection Setup

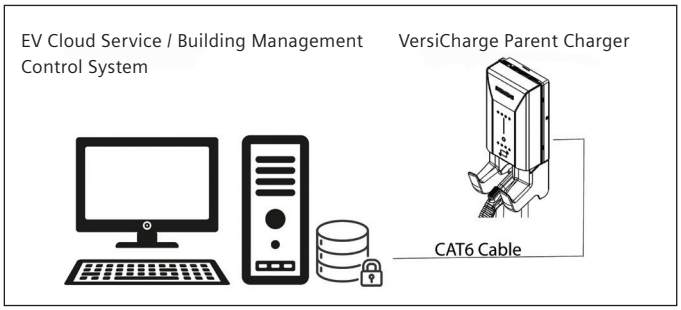


Figure 13. Ethernet connection wiring

3.7 ModBus communications setup

Using the ModBus RTU protocol. VersiCharge chargers can act as ModBus Child devices making any real-time data available through the ModBus RTU protocol. ModBus Parent devices connected to the charger can access (read) this data or write data to the charger's registers, making device configuration changes and initiating control actions.

3.7.1 ModBus RTU Connection – Part Numbers

8EM1310-4CF14-0GA0, 8EM1310-5CF14-0GA0, 8EM1310-4CF14-1GA1, 8EM1310-5CF14-1GA1

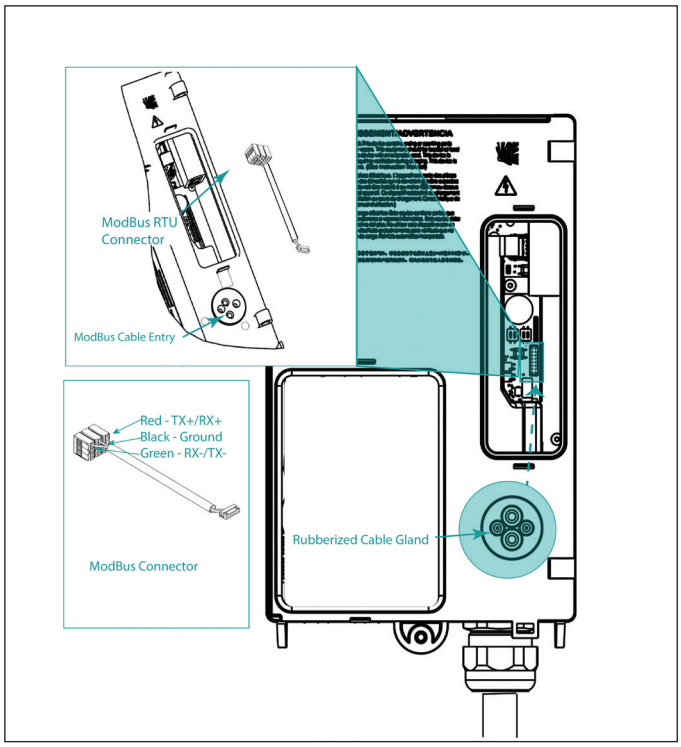


Figure 14. ModBus connection

NOTE: The ModBus RTU connector should NOT be on the ModBus cable when it is pushed through the rubberized ModBus cable gland. This gland will not self-seal if the connector is pushed through the rubberized ModBus cable gland and the NEMA 4 rating will be lost.

1. Push the external ModBus RTU cable through the rubberized ModBus gland at the back of the charger (this will self-seal).
2. Attach the external ModBus cable wires to the internal (supplied) ModBus connector.
3. Gently tuck the wiring into the space and secure the back of the charger.

Security Note: The ModBus RTU is an open protocol, and it is the responsibility of the installer to ensure the security of the wiring of these connections to prevent tampering.

3.7.2 ModBus Termination Switch Settings – Part Numbers

8EM1310-4CF14-0GA0, 8EM1310-5CF14-0GA0, 8EM1310-4CF14-1GA1, 8EM1310-5CF14-1GA1

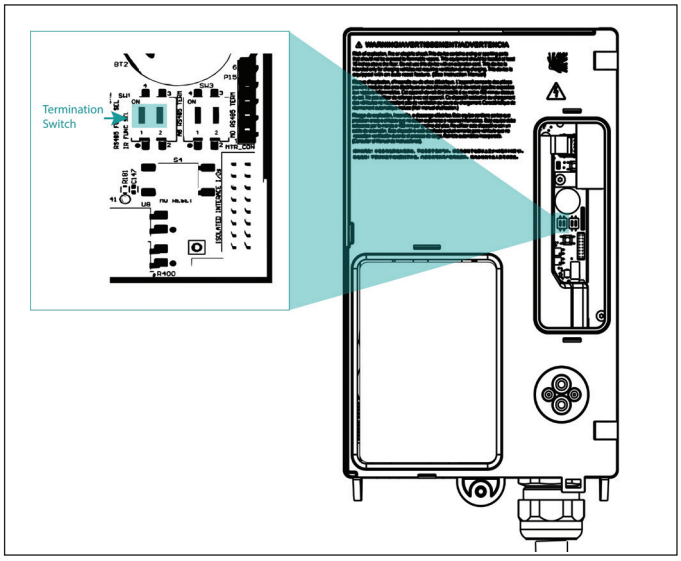


Figure 15. Termination switch setting for parent/child units

1. SW3-1 (left side) labelled A8 RS485 is the Termination switch. This switch should be in the ON position for the Parent unit or in the OFF position for a Child unit, unless that Child is the last Child in the daisy chain, then it must be ON.

3.7.3 ModBus Termination Switch Settings – Part Numbers

8EM1310-4CF14-0GA0, 8EM1310-5CF14-0GA0 (Applicable to Child units ONLY)

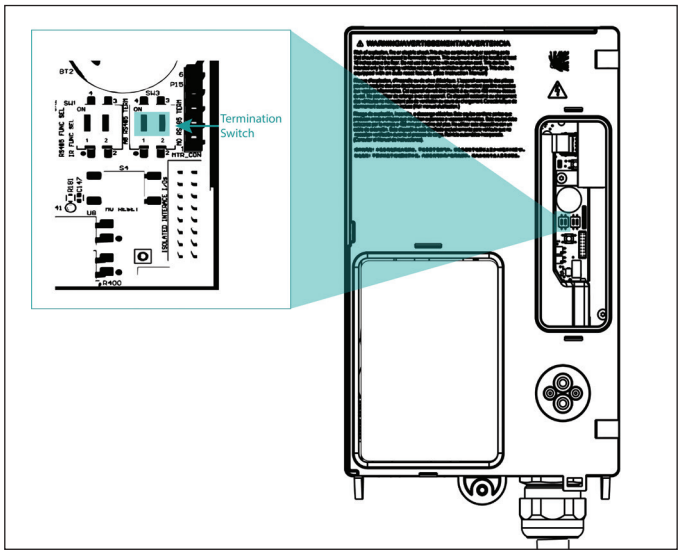


Figure 16. Termination switch setting for child units only

1. SW3-2 (right side) labelled M0 RS485 Term is the Termination switch. For the Child units the Termination switch must be set to OFF, unless the unit is the last one in the daisy chain, then the switch must be set to ON.

3.7.4 General ModBus RTU RS-485 wiring considerations

Devices connected on the ModBus RTU, including the Child, converter(s) and other instrumentation, must be wired as follows:

- Connect the shield of each cable segment to ground at one end only.
- Isolate cables, as much as possible, from sources of electrical noise.
- Install a ¼ Watt termination resistor (RT) between the (+) and (-) terminals of the device at each end point of a straight-line bus. The resistor should match the nominal impedance of the RS-485 cable, which is typically 120 ohms (consult the manufacturer's documentation for the cable's impedance value).

RS-485 Connection methods to avoid

Any device connection that causes a branch in the main RS-485 ModBus cable should be avoided. This includes star and tee (T) methods. These wiring methods cause signal reflections that may result in interference. No more than two cables should be connected at any connection point on the RS-485 ModBus daisy chain. This includes connection points on instruments, converters, and terminal strips. Following these guidelines ensures that both star and tee connections are avoided.

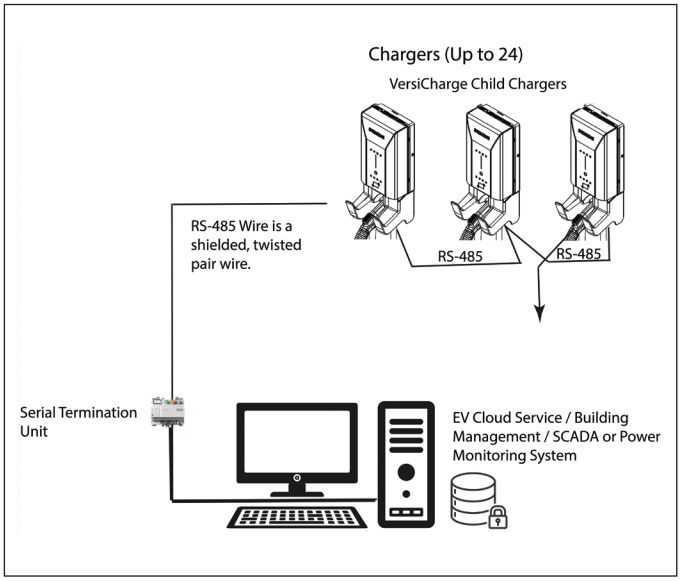


Figure 17. Serial modbus network wiring example

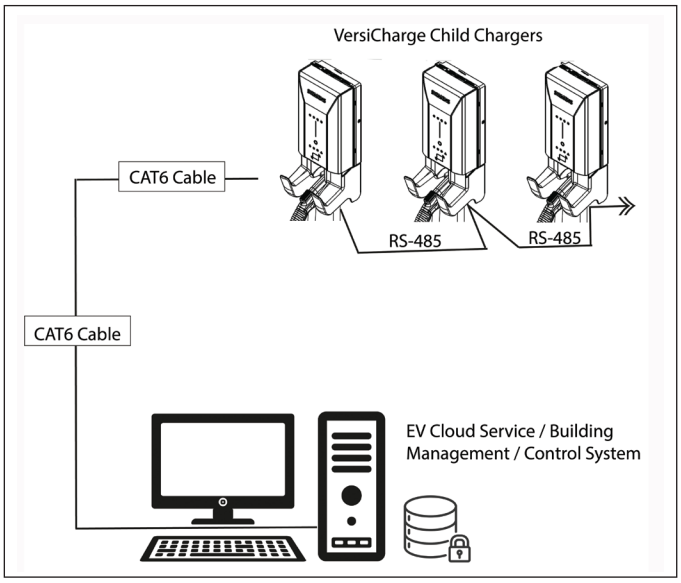


Figure 18. Serial connection wiring ground to controller

Setup for Modbus RTU communications see Figure 19 above.

ModBus RTU Implementation Limitations (see the table below).

Function Codes Supported	a. 0x03(Multiple register read group wise with valid length of the read group) b. 0x10 (Multiple register write, parameter wise), c. 0x11(Broadcast). – Condition is to have a single unit connected on ModBus
Max number of units to be connected by the ModBus Controller	24
Max Length of wire	4000 ft
Polling Rate	1S (Min 500mS)

3.7.4.1 Setup Details (Using ModBus Poll as an example)

a. Connect RS 485 cable between PC and EVSE VersiCharge using ModBus cable and connector (see ModBus Connection).

b. Go to Connection->Connect as shown in next image.

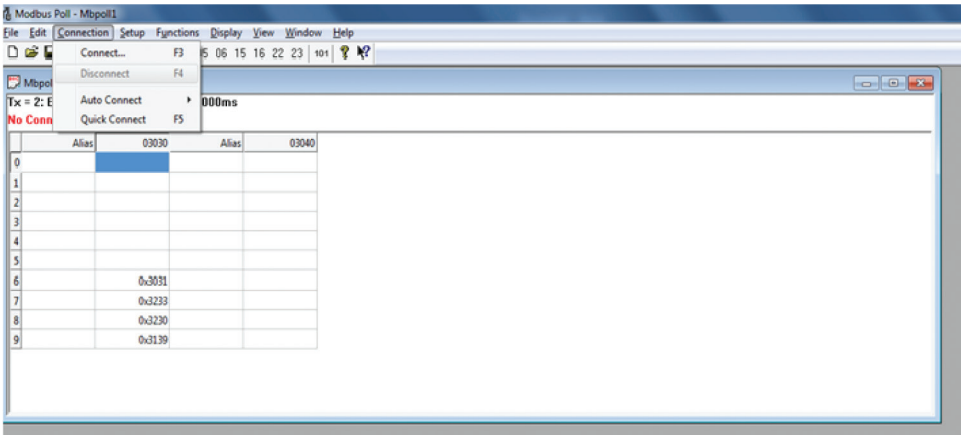


Figure 19. ModBus RTU setup

c. Connect by selecting serial port used to connect to EVSE using USB to RS485 adapter (PN: USPTL4-LS or similar)

d. The following connection set-up should be used. Click OK after set-up is complete.

   i. Baudrate = 38400

   ii. Parity = even

   iii. Databits = 8

   iv. Stopbit = 1

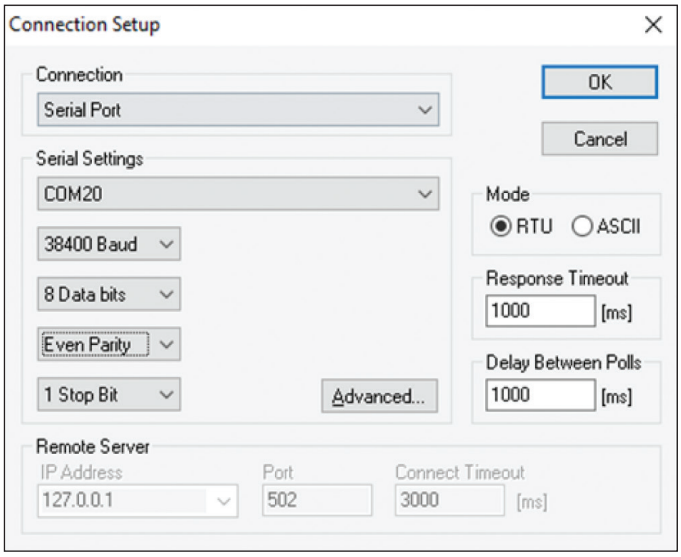


Figure 20. ModBus setup connection

e. Navigate to Setup -> read/write definition.

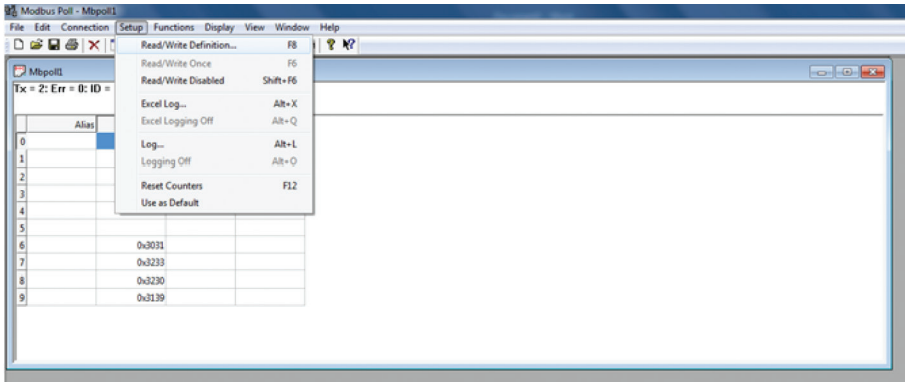


Figure 21. ModBus read/write setup

f. Read Operation: Enter the register to be read in Address box, number of registers to be read in Quantity box. Click OK to read continuously the same value. If read only once is desired, then click on “Read/write once” tab. Also, in the last, there is a display option. This will give an option to display the read value in different format.

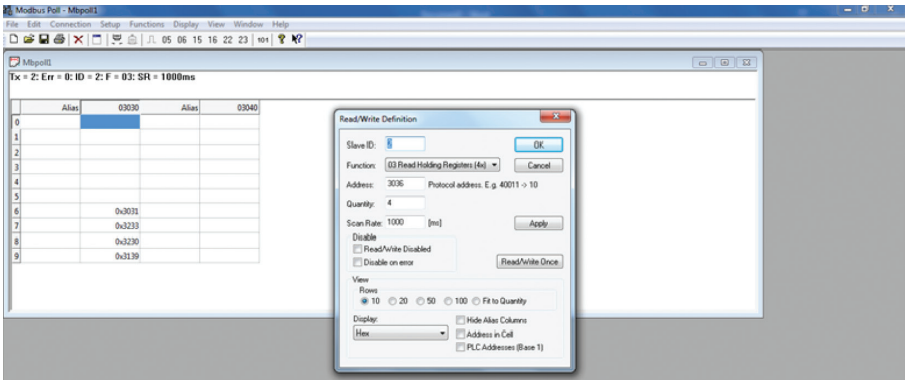


Figure 22. ModBus read/write definition

g. Write Operation:

i. Go to Functions->Write Registers from Menu.

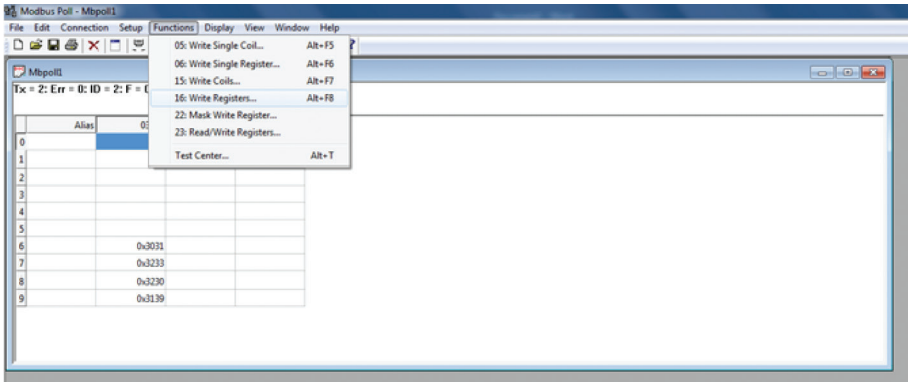


Figure 23. ModBus – write register

ii. Configure register address in Address box, number of registers as Quantity to be written, and then fill the values. Click on send button.

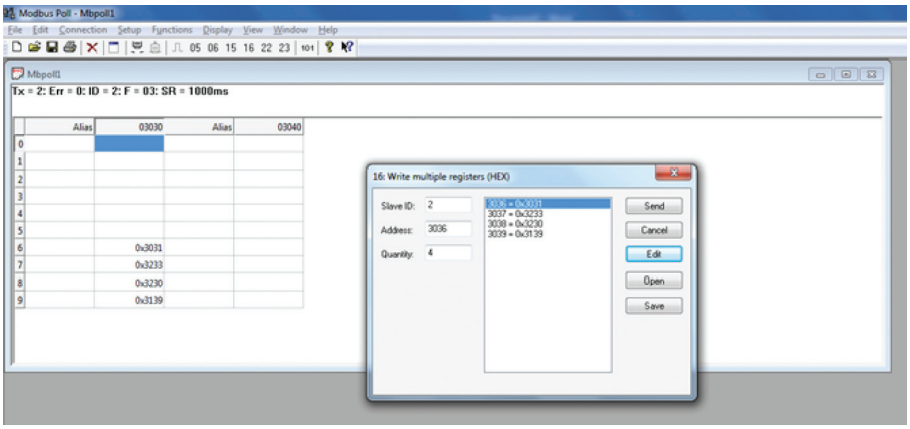


Figure 24. ModBus – configure register address

4: RFID Setup

RFID Cards Supported by VersiCharge

Cards Family	Memory	Security	Protocol Support
MIFARE Classic	1K, 4K	Crypto1	ISO14443A Part 1-3
MIFARE Plus	1K, 2K,4K	AES, Crypto1	ISO14443A Part 1-4
MIFARE DESFire	2K, 4K, 8K	AES, 3DES	ISO14443A Part 1-4
MIFARE Ultralight	40,48,128,144	None, 3DES	ISO14443A Part 1-3

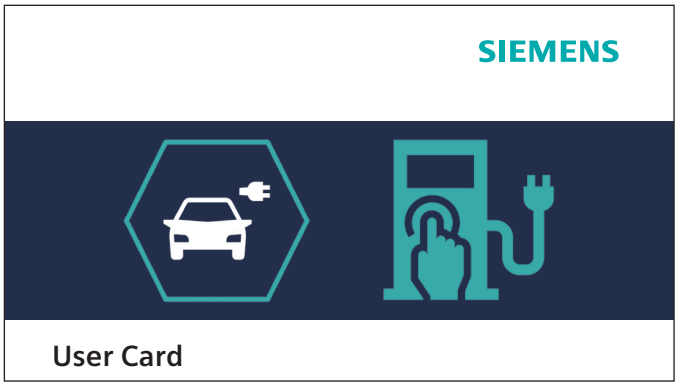
RFID functionality is an available feature for part numbers 8EM1310-4CF14-0GA0, 8EM1310-5CF14-0GA0, 8EM1310-4CF14-1GA1, and 8EM1310-5CF14-1GA1. Pass the RFID card in front of the RFID and, if successful, the Charging Process Light will flash twice from the bottom up, there will be an audible tone increasing to one second long. If the card swipe is not successful, the Charging Process Lights will flash for one second, decreasing to .25 seconds; this will happen two times. There will be an audible tone, decreasing if card swipe is unsuccessful.

RFID State	Description
RFID Swipe Successful	Charging LED ON/Blinking. White #2, #4, #6 & #8 every 1/4 second in incremental pattern starting from 0.25S, 0.5S,0.75S and 1S. Repeat 2 times. Audible single beep tone.
RFID Swipe not successful	Charging LED OFF. White #2, #4, #6 & #8 one Second in decremented pattern starting from 1S, 0.75S,0.5S and 0.25 S. Repeat 2 times. Audible dual beep tone.

RFID card management can be performed via the ModBus controller, OCPP-based server, or manually using Admin cards provided with the unit - (Note: Admin cards may not be used when the unit is connected to an OCPP server). For more information on how RFID is implemented in the OCPP protocol--see the OCPP Implementation Guide for VersiCharge AC Series of Chargers at usa.siemens.com/versicharge. Please refer to ModBus map to implement the appropriate commands to add/remove or authorize charging sessions. VersiCharge maintains a local preauthorized list which holds the list of all authorized user cards. An authorized user card in the preauthorized list, when tapped, will allow the charging session to start.

To add user cards to pre-approved, tap Admin card, followed by tapping user card(s) that are to be added to the preauthorized list. Once all user cards are added, tap the Admin card to finish the operation of adding user cards to local preauthorized list. In order to remove a user card from pre-approved, tap the Admin card followed by the user card already in the preauthorized list, then tap Admin card again to end the removal process.

Admin Card



User Card

5: Application Set UP

Siemens is proud to offer industry-leading control and monitoring functionality built into the VersiCharge product.

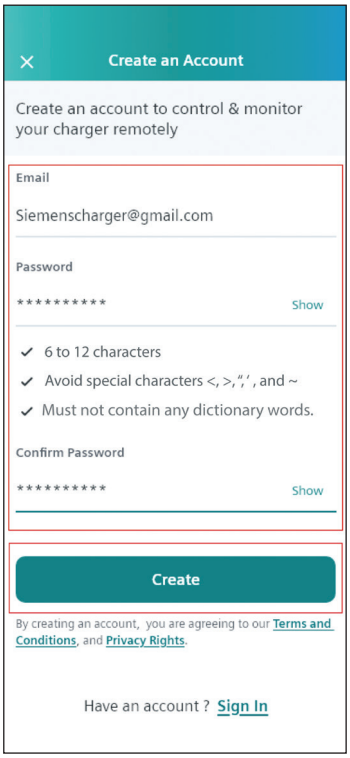
1. **Smartphone Application.** This is the preferred method for most VersiCharge owners. Search for "VersiCharge" in the App Store for the iOS operating system (for iPhone owners) or in the Google Play Store for the Android operating system. Download the application.
2. **PC Application.** Using a PC, control and monitor the VersiCharge by using the VersiCharge Configuration Tool. The VersiCharge Configuration Tool has been designed to allow the commissioning of multiple chargers efficiently, as well as the configuration of parent/child networks, and should be used whenever more than one charger is being installed at a site.

NOTE: In case of a Wi-Fi network failure, the charger will continue to function based upon the registered state. If the schedule function is enabled, it will continue to run indefinitely. All demand response settings will be saved. User interface functionality will remain the same.

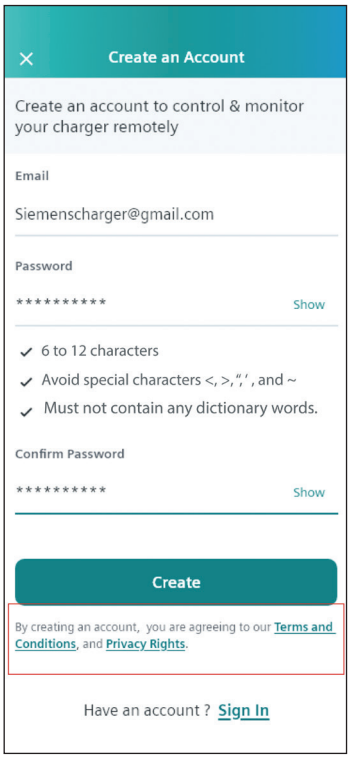
5.1 Mobile App User Registration – Residential Units or Single Charger Installations Only (See FAQs for Mobile App Details at usa.siemens.com/versicharge)

- Install the VersiCharge Mobile Application from Google Play (https://play.google.com/store) Store or Apple App Store https://www.apple.com/app-store/) (ensure you have an internet connection on your VersiCharge). The web app and smartphone app follow the same steps.
- Open the app and select "Create" to create an account.
- Complete the steps (see below) and by creating the account you are accepting the Privacy Policy.

5.1.1 Create an Account

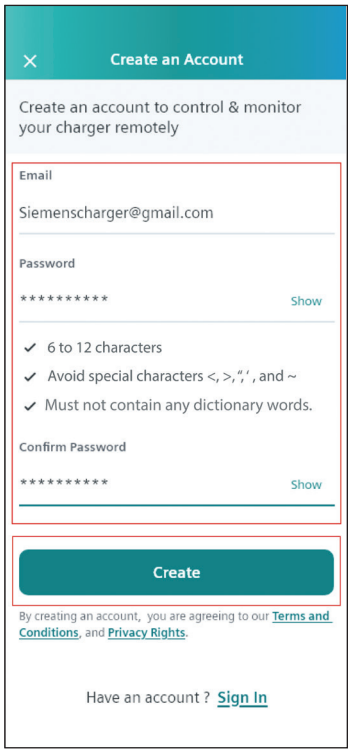


Create An Account: Select Create One

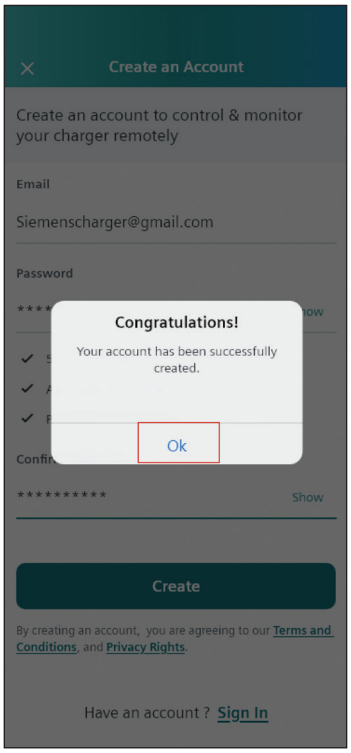


Select Terms & Conditions or Privacy Rights to view them.

View Privacy Rights



Fill in email, password and select Create.



Select Ok when account is successfully created.

NOTE:

- Username: Minimum four characters and maximum of ten, must contain at least one letter, special characters allows: !, $, _, and –
- Password: Minimum of five characters with suggested maximum of 12 characters, avoiding special characters (<, >, ", ', and ~)

5.2 Link Charger to Your Account (Residential Units Only)

The following process links your VersiCharge to your chosen wireless network, enabling communication with the Siemens Cloud network.

- Sign in or Create an Account.
- Follow steps 1 through 5 to link your charger to your account and manage your charger using the Mobile App.

NOTE: 40A Unit Only - Before beginning to link the charger to an account, ensure the breaker powering the dedicated branch circuit is 'OFF'; plug in the VersiCharge. Turn breaker 'ON' after plugging the unit in.

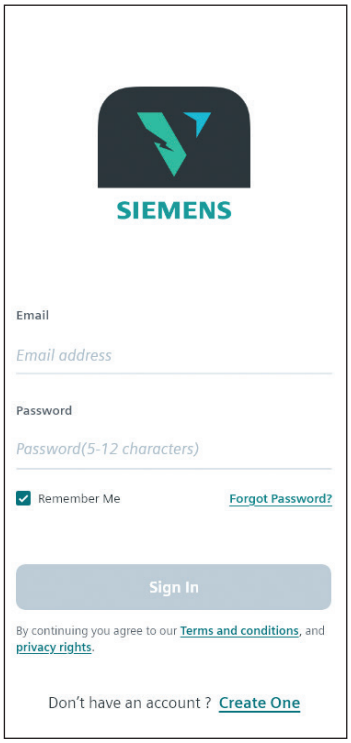
- The Power Available LED will turn white and the Wi-Fi Status LED will go through the following process:
  - Indicator should initially slowly blink red and then switch to slowly blinking yellow, then white.
  - Once the indicator slowly blinks white the charger has transitioned to Access Point mode (AP) and is ready to be connected to a Wi-Fi network.
- Once in AP mode, you may use your VersiCharge mobile app or your laptop to commission the VersiCharge to a network with an open Internet connection to establish connection to the Siemens VersiCloud system for management and to receive periodic charger updates.

Wi-Fi LED Light Sequence When Adding a Charger

Description of Sequence	LED Color (Blinking)	LED Color (Steady)
Power up		
Software loading		
Software running		
Charger in Access Point (AP) mode		
Receiving connection credentials		
Received connection credentials		
Connecting to network		
Connected to network		
Connecting to VersiCloud		
Connected to network, registered and connected to VersiCloud		

NOTE: Grey LED Color indicates no lit LED.

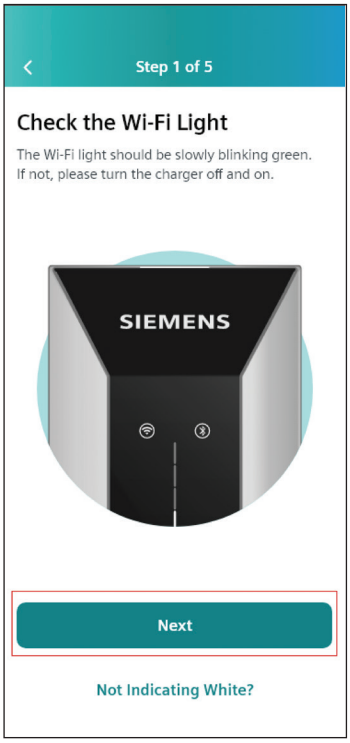
5.2.1 Sign In:



Sign in with email and password, select Sign In.

Select Add a Charger.

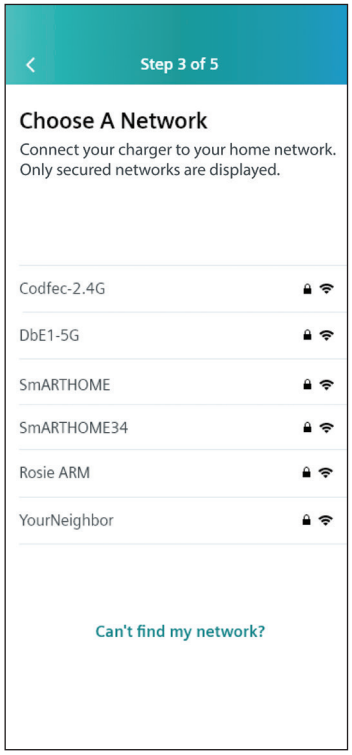
Add a charger is the landing page until a charger has been linked to your account.



Step 1 – Check the Wi-Fi Light – it should be blinking white.

Select Next.

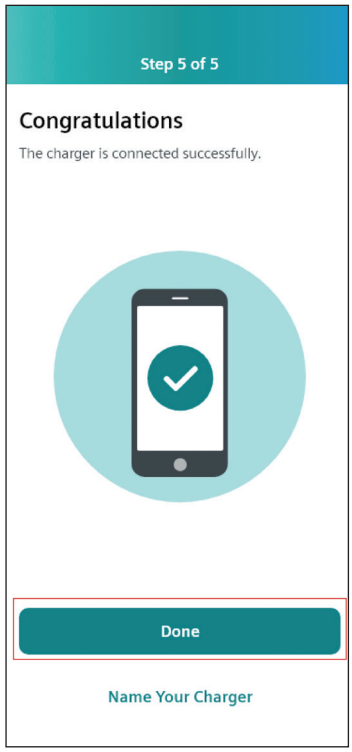
Step 2 – Select Next once the VersiCharge has been found.



Step 3 – Choose a Network by clicking on the network.

Step 4 – Enter Password for the network. Note: Passwords are case sensitive.

Step 5 – Wait for the charger to connect with the Siemens Cloud. For information about the LED lights during commissioning, see the Wi-Fi LED Light Sequence When Adding a Charger table under section 5.2 above.

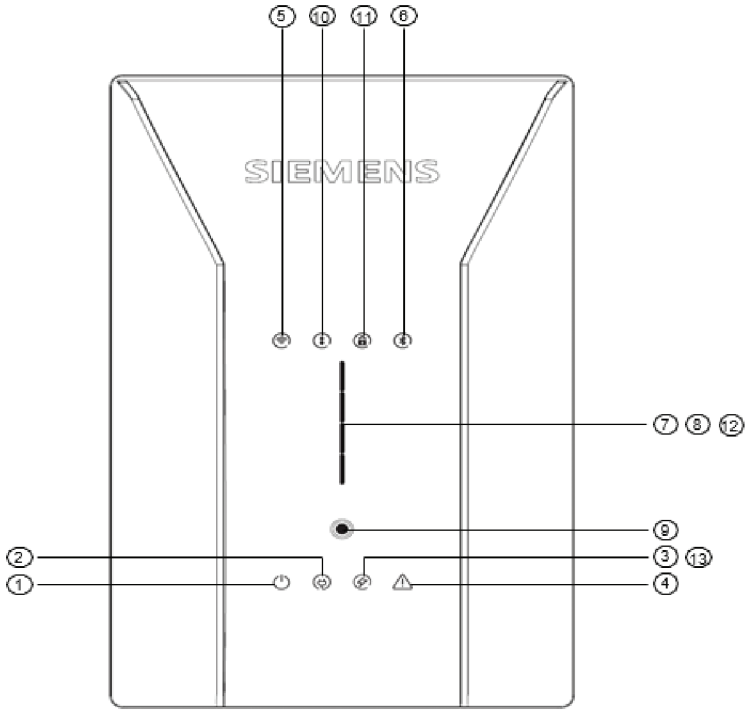


Select Done once the "Congratulations" screen appears.

6: Configure VersiCharge (Commercial Units Only)

- Download the Configurator Tool from: usa.siemens.com/versicharge
- Download the VersiCharge Configuration tool Installation manual at usa.siemens.com/versicharge
- Download the VersiCharge Configuration Tool Manual at: usa.siemens.com/versicharge.
- Unzip the Configuration Tool and install. Step through configuration of VersiCharge. Use the manual for any questions.

7: HMI



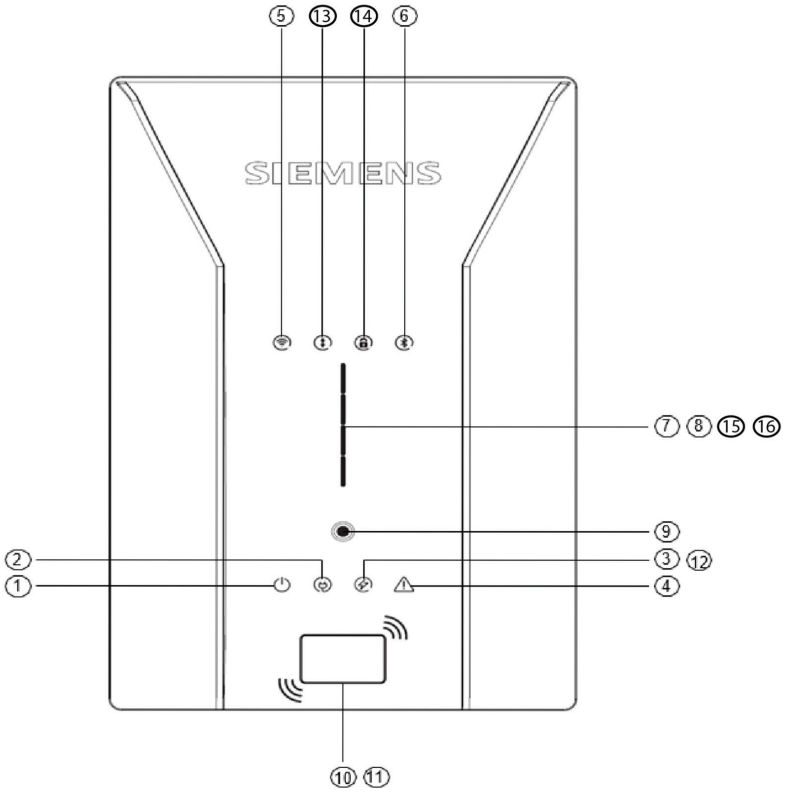
Visual HMI Elements

01: Status LED Power On
02: Status LED Car connected
03: Status LED Charging
04: Status LED Fault
05: Wi-Fi LED –Wi-Fi
06: Bluetooth LED
07: Time Delay LED – Bar
08: Charging Process Light
09: Touch Sensitive Button
10: Unit under Remote Control
11: Front Panel Locked
12: Fault conditions

Audible HMI Elements

13: Relays / Switching Sound

Figure 25. HMI without an RFID feature



Visual HMI Elements

01: Status LED Power On
02: Status LED Car connected
03: Status LED Charging
04: Status LED Fault
05: Wi-Fi LED –Wi-Fi
06: Bluetooth LED
07: Time Delay LED – Bar
08: Charging Process Light
09: Touch Sensitive Button
10: RFID – Symbol –RFID
13: Unit under Remote Control
14: Front Panel Locked
15: RFID - Accept / Denied
16: Fault Conditions

Audible HMI Elements

11: RFID – Accept / Decline *
12: Relays / Switching Sound

*Accept is one single beep repeated.
Decline is two beeps repeated.

Figure 26. HMI with an RFID feature

- The Power Available LED will turn white and the Wi-Fi Status LED will go through the following process:
  - Indicator should initially slowly blink red and then switch to slowly blinking yellow, then white.
  - Once the indicator slowly blinks white the charger has transitioned to Access Point mode (AP) and is ready to be connected to a Wi-Fi network.
- Once in AP mode, you may use your VersiCharge mobile app or your laptop to commission the VersiCharge to a network with an open internet connection to establish connection to the Siemens VersiCloud system for management and to receive periodic charger updates.

8: Exterior—LED Indicators

1. Power Available
2. Pause
3. Charging
4. Service Portal
5. Wi-Fi Status
6. Time Delay
7. Ready
8. Fault
9. Remote Control
10. Remote Control Lock
11. Time Delay Duration (hrs.)

9: Maintenance

While there is no maintenance for the internal works of the VersiCharge, the exterior does require some basic, common sense maintenance. The following maintenance can be performed by the owner/user. All other service must be conducted by qualified personnel.

If there is any damage to the charger, contact your supplier.

General exterior maintenance is recommended to be performed every six months depending on the environment. In harsh environments, maintenance should be performed more often.

9.1 General exterior maintenance

Regular cleaning is recommended to avoid accumulation of debris/dust/dirt on or around the unit. Wipe surfaces with a soft cloth dampened with water, or for harder to remove marks, use an alcohol based cleaner. Do not spray with high pressure cleaning hoses or use abrasive chemicals.

9.2 General external checks

Check for cuts, damage, and debris. If debris is present, remove it. If you find damage, contact your supplier.

Check for damage and corrosion. If present, contact your supplier.

Check the HMI for damage/signs of faded color that is clearly visible.

Ensure there is no debris or damage inside or around the cable, cable holder and connector/plug. If present, remove debris and/or notify the supplier of any damage. Check the connector/plug pins for any signs of corrosion and contact the supplier, if there is any damage to the pins.

Check for snow buildup around the VersiCharge and clear the area around the VersiCharge. This should be checked daily in areas with high snowfall.

10: Warranty

10.1 Limited Warranty

Siemens Industry Inc., Future Grid, EMobility (“Siemens”) has developed a highly reliable EV Supply Equipment (EVSE), branded as VersiCharge ("VersiCharge EVSE"), that is designed to withstand normal operating conditions when used in compliance with the Siemens Installation and Operations Manual supplied with system as originally shipped by Siemens. The Siemens limited warranty ("Limited Warranty") covers defects in workmanship and materials of the VersiCharge EVSE ("Defective Product") for a period of three (3) years (the “Warranty Period”) from the date of registration of such VersiCharge EVSE via the registration portal (weblink). The VersiCharge EVSE must be registered within 90 days of purchase to activate the warranty policy including the Siemens Care package.

The Limited Warranty does not apply to, and Siemens will not be responsible for, any defect in or damage to any Siemens VersiCharge EVSE: (1) that has been misused, neglected, tampered with, altered, or otherwise damaged, either internally or externally; (2) that has been improperly installed, operated, handled or used, including use under conditions for which the product was not designed, use in an unsuitable environment, or use in a manner contrary to the Siemens Installation and Operations Manual or applicable laws or regulations; (3) that has been subjected to fire, water, generalized corrosion, biological infestations, acts of God, or input voltage that creates operating conditions beyond the maximum or minimum limits listed in the Siemens VersiCharge EVSE specifications, including high input voltage from generators or lightning strikes; (4) that has been subjected to incidental or consequential damage caused by defects of other components of the electrical system; or (5) if the original identification markings (including trademark or serial number) of such VersiCharge EVSE have been defaced, altered, or removed. The Limited Warranty does not cover costs related to the removal, installation or troubleshooting of the customer’s electrical systems. Siemens’ aggregate liability under the Limited Warranty shall not exceed the original cost of the Defective Product.

During the Warranty Period, Siemens will, at its option, repair or replace the non-compliant portion of the Defective Product free of charge, provided that Siemens through inspection establishes the existence of a Defective Product covered by the Limited Warranty. Siemens will, at its option, use new and/or reconditioned parts in repairing or replacing the Defective Product.

Siemens reserves the right to use parts or products of original or improved design in the repair or replacement of Defective Product. If the product has a Wi-Fi module and contains a defect due to the faulty Wi-Fi module, Siemens may replace only the Wi-Fi module or the entire unit at its sole and absolute discretion. If Siemens repairs or replaces a Defective Product, the Limited Warranty continues on the repaired or replacement product for the remainder of the original Warranty Period or ninety (90) days from the date of Siemens’ return shipment of the repaired or replacement product, whichever is later.

The Limited Warranty covers both parts and labor necessary to repair the non-compliant portion of the Defective Product, but does not include labor costs related to un-installing the Defective Product or re-installing the repaired or replacement product. The Limited Warranty also covers the costs of shipping Siemens VersiCharge EVSE’s to Siemens (where Siemens has first issued a Return Merchandise Authorization / Return Goods Authorization ("RMA" / "RGA") number for such product) as well as repaired or replacement product from Siemens to customer, via a non-expedited freight carrier selected by Siemens, to and from locations within the United States (including Alaska and Hawaii) and Canada, but not to or from other locations outside the United States or Canada.

The Limited Warranty does not cover shipping damage or damage resulting from mishandling by the freight carrier. Where customer seeks to remedy damages caused by the freight carrier, such claims must be pursued directly against the freight carrier and not against Siemens. Siemens’ repair and replacement obligations under this Limited Warranty are conditioned upon the customer’s strict compliance with the following policy and procedure:

- All Defective Product must be returned with a RMA / RGA number which customer must request from Siemens.
- RMA/RGA request must include the following information:
  - Proof-of-purchase of the Defective Product in the form of (1) the dated purchase receipt from the original purchase of the product at point of sale to the end user, or (2) the dated dealer invoice or purchase receipt showing original equipment manufacturer (OEM) status.
  - Model number of the Defective Product
  - Serial number of the Defective Product
  - Detailed description of the defect
  - Shipping address for return of the repaired or replacement product
- All Defective Product authorized for return must be returned in the original shipping container or other packaging that is equally protective of the product.
- The returned Defective Product must not have been disassembled or modified without the prior written authorization of Siemens.

THE LIMITED WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY SIEMENS AND, WHERE PERMITTED BY LAW, IS MADE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF TITLE, QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OR WARRANTIES AS TO THE ACCURACY, SUFFICIENCY OR SUITABILITY OF ANY TECHNICAL OR OTHER INFORMATION PROVIDED IN MANUALS OR OTHER DOCUMENTATION. IN NO EVENT WILL SIEMENS BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES, COSTS OR EXPENSES HOWEVER ARISING, WHETHER IN CONTRACT OR TORT, INCLUDING WITHOUT LIMITATION ANY ECONOMIC LOSSES OF ANY KIND, ANY LOSS OR DAMAGE TO PROPERTY, OR ANY PERSONAL INJURY AND SIEMENS’ AND ITS SUPPLIERS’ MAXIMUM LIABILITY UNDER THIS CONTRACT SHALL BE THE ACTUAL PURCHASE PRICE RECEIVED BY SIEMENS FOR THE DEFECTIVE PRODUCT AT ISSUE, OR ONE MILLION DOLLARS,

WHICHEVER IS LESS. CUSTOMER AGREES THAT THE EXCLUSIONS AND LIMITATIONS SET FORTH IN THIS SECTION SHALL GOVERN AND CONTROL OVER ANY OTHER REMEDIES TO WHICH CUSTOMER MAY OTHERWISE BE ENTITLED AND SHALL BE GIVEN FULL FORCE AND EFFECT WHETHER OR NOT ANY OR ALL SUCH REMEDIES SHALL BE DEEMED TO HAVE FAILED OF THEIR ESSENTIAL PURPOSE. THESE LIMITATIONS OF LIABILITY ARE EFFECTIVE, EVEN IF SIEMENS HAS BEEN ADVISED BY THE CUSTOMER OF THE POSSIBILITY OF SUCH DAMAGES.

To the extent any implied warranties are required under applicable law to apply to the Siemens VersiCharge EVSE, such implied warranties shall, to the extent permitted by applicable law, be limited in duration to the Warranty Period. In states and provinces which do not allow limitations or exclusions on implied warranties or on the duration of an implied warranty or on the limitation or exclusion of incidental or consequential damages, the above limitation(s) or exclusion(s) may not apply. This Limited Warranty gives the customer specific legal rights, which are the customer's exclusive remedies hereunder. The customer may have other rights that vary from state to state or province to province.

11: Help!

Call us any time, any day at: 1- 800-333-7421 or
Email us at: helpline.sii@siemens.com

VersiCharge AC Series – Technical data

Features and functions	
Charging mode	Level 2
Vehicle connection	J1772 plug with 20 ft cable, 40/48 A / integrated cable management
AC power output	Single phase up to 9.6 kW (40 A) or 11.5 kW (48 A)
Mounting options	Wall and post mounting, see accessories
Touch Button	Time delay, return to max, power level, reset ground fault
Charging status LEDs	Power, Cold start, time delay, charging state, reduced power level, authentication
Communication status LEDs	Connected / not connected during operation, signal strength during commissioning
Load management	via OCPP
Communication①	
Interfaces	Ethernet and Wi-Fi
User authentification	Ready for plug-and-charge acc. to ISO 15118 (upgradeable OTA)
Configuration	via Siemens mobile app
Back-end protocol	OCPP 1.6, upgrade-able to OCPP 2.0
Software upgrade	over the air (OTA)
Electrical design	
Power supply voltage	Single phase: 208 V / 240 V AC, 60 Hz
Rated current settings (A)	12, 16, 24, 32, 40, 48
Cross wire section	Single phase: 8 Awg / 6 Awg (75C rated wire)
Network type	Single phase / split phase
Energy metering①	revenue accurate, ANSI C12.20 compliant metering
Ground fault protection	20 mA
DC residual current monitoring	Not applicable
Over voltage protection	Under voltage: 167 V (min. 80 V) / over voltage: 267 V (max. 275 V)
Over current protection	Current +10% above configured threshold, min. +2A, 5 seconds
Operating altitude	9,840 ft
General design	
Environmental rating	Indoor and Outdoor, NEMA 4, IK 10
Dimensions (HxWxD)	16.10 x 7.09 x 3.78 (in)
Weight	17 lbs
Ambient conditions	Operating temperature: -31°F - +122°F, Storage Temp.: -40°F to +140°F, 98% non-condensing
Colors	Silver Metallic (Pantone 10077), Black holster
Certificates and standards	
cUL listed	according to 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, UL 2251/CSA C22.2 No.282/NMX-J-678-ANCE
EMC	FCC Part 15.247, FCC Part 15B, FCC Part 15C

① Only applicable for 8EM1312-4CF18-0FA3 and 8EM1312-5CF18-0FA3.

		Max. current	Model number	HW ready for ISO 15118	Wi-Fi and Ethernet	Modbus RTU / TCP	RFID identification	Revenue grade metering	LTE WCDMA
Single-family versions	Basic	40 A	8EM1312-4AF10-0AA3	–	–	–	–	–	–
		48 A	8EM1312-5AF10-0AA3						
	High End	40 A	8EM1312-4CF18-0FA3	✓	✓	–	–	✓	–
		48 A	8EM1312-5CF18-0FA3						
Multi-family versions	Child	40 A	8EM1310-4CF14-0GA0	✓	✓	✓	✓	✓	–
		48 A	8EM1310-5CF14-0GA0						
	Parent	40 A	8EM1310-4CF14-1GA1	✓	✓	✓	✓	✓	✓
		48 A	8EM1310-5CF14-1GA1						

Appendix A – Operating and Fault Lights

Light State	Description	Solution
Normal Operation		
Light #1	#1 Ready to Charge – Power On – light steady white	Connect EV. Begin charge.
Light #2	#2 Car Connected - Light steady white	Disconnect the EV connection cable.
Light #5	#5 Wi-Fi Status – No Wi-Fi- Light flashing red	Check router.
Light #5	#5 Wi-Fi Status – Wi-Fi Weak – Light flashing orange	Consider using a Wi-Fi extender to boost the signal.
Light #5	#5 Wi-Fi Status - Wi-Fi Strong – Light flashing green	No Action
Light #7	#7 Time Delay Light - Delay 2 hours – Light flashing white	Wait for charge.
Light #7	#7 Time Delay Light - Delay 4 hours – Light flashing white	Wait for charge
Light #7	#7 Time Delay Light - Delay 6 hours – Light flashing white	Wait for charge
Light #7	#7 Time Delay Light - Delay 8 hours – Light flashing white	Wait for charge
Light #9	#9 – Touch Sensitive Button – Press Button for 5 seconds to maximize power level.	Cancel the remote power setting by pressing button 5 seconds continuously and maximizes Power.

NOTE: Some errors are not caused by the VersiCharge, but by EV compatibility or by settings which are turned on in the EV. See the Faults table below. If the unit is going into a fault state, check the settings in the EV. Many EVs have a setting for time-of-charge, for example, in which the user defines the charging time. Settings like this will override all commands within the VersiCharge for safety reasons and will stop charging. Adjusting the EV settings will resolve this.

Light State	Description	Solution
Faults		
Light #9	#9 – Touch Sensitive Button – Reset Ground Fault – Press once to reset the unit.	The unit is in a fault state. Press one time to reset the ground fault.
Light #4	#4 Fault occurring – Light flashing red	Power cycle/turn breaker off and then on
Light # 4 Light # 7	#4 + #7 (4 hr. delay light) – Lights steady red	Call Tech Support
Light # 4 Light #7	#4 + #7 (2 hr.+4 hr. delay light) – Both lights are steady red	Call Tech Support
Light #4 Light # 7	#4+ #7 (2 hr. delay light) – Fault occurring	Call Tech Support
Light # 4 Light # 7	#4+ #7 (2 hr. + 6 hr. delay light) – Fault occurring	Call Tech Support
Light # 4 Light #7	#4+ #7 (2 hr.+ 8 hr. delay light) – Fault occurring	Call Tech Support
Light # 4 Light #7	#4+ #7 (2 hr. + 4 hr. + 6 hr. +8 hr. delay light) – Fault occurring	Call Tech Support
Light #4 Light # 7	#4+ #7 (4 hr. delay light) – Fault occurring	Call Tech Support
Light #4 Light #7	#4+ #7 (4 hr. + 6 hr. delay light) – Fault occurring	Call Tech Support
Light #4 Light #7	#4+ #7 (6 hr. delay light) – Fault occurring	Call Tech Support
Light #4 Light #7	#4+ #7 (8 hr. delay light) – Fault occurring	Call Tech Support
Light # 4 Light # 7	#4+ #7 (4 hr. + 6 hr. +8 hr. delay light) – Fault occurring	Call Tech Support

Steady light –

Flashing light –

Touch Senstive Button -

NOTE:
Light #1 is the Power Status LED.
Light #2 is the Car Connected Status LED.
Light #5 is the WI-Fi LED status.
Light #4 is the LED Fault light.
Light #7 is the Time Delay LED Light bar with 2, 4, 6, and 8 hour delay lights – some combination of lights 4 and 7 indicate the fault.
Light #9 is the Touch Sensitive Button.

Appendix B – Useful Links

Find the following at: usa.siemens.com/versicharge

- Register your VersiCharge
- Download the VersiCharge Configuration Tool
- Configure your VersiCharge
- VersiCharge Frequently Asked Questions
- Open Source Clearance Report with usa.siemens.com/versicharge

Appendix C – Wiring Schematics for VersiCharge 40 A and 48 A VersiCharge Units

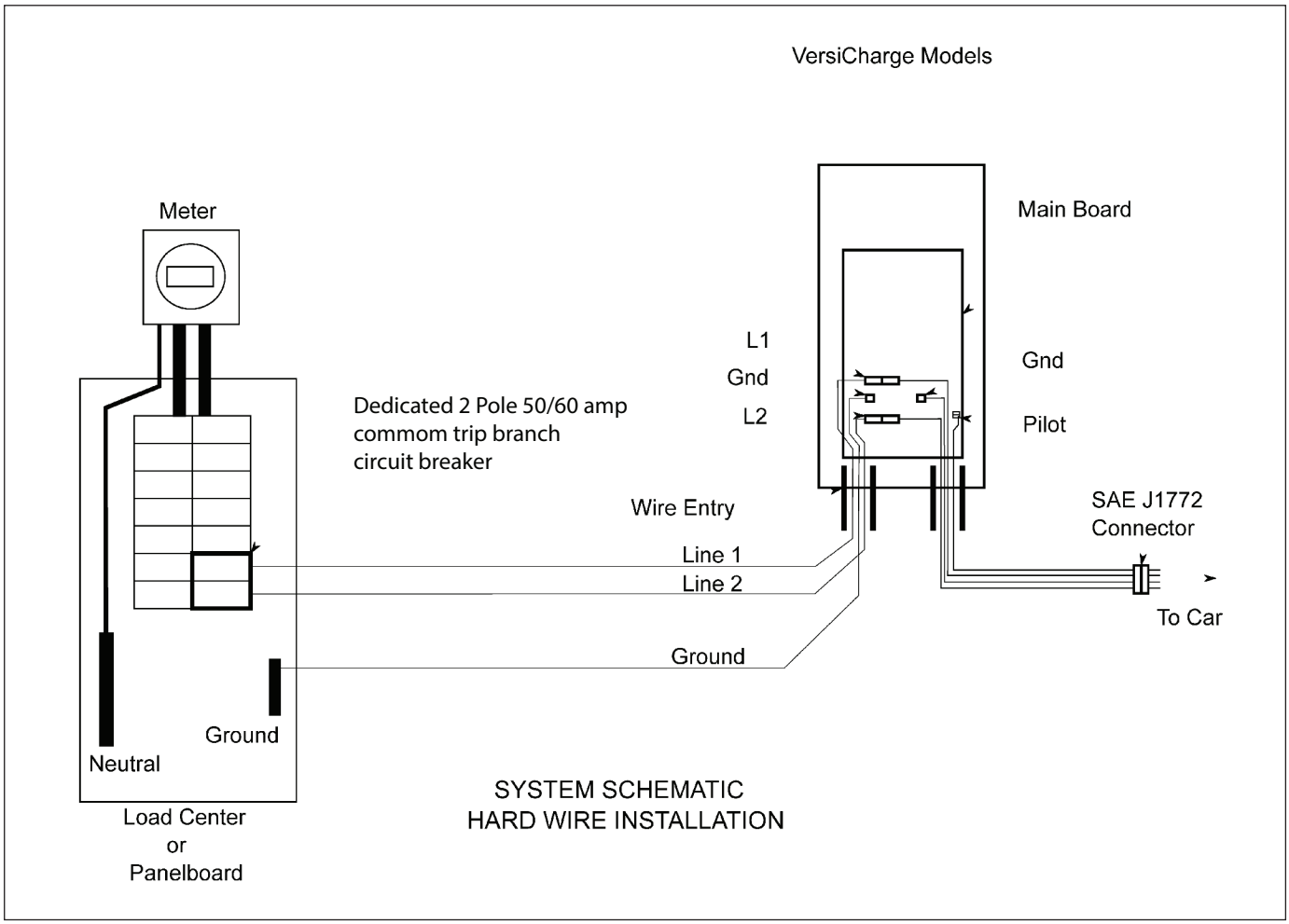


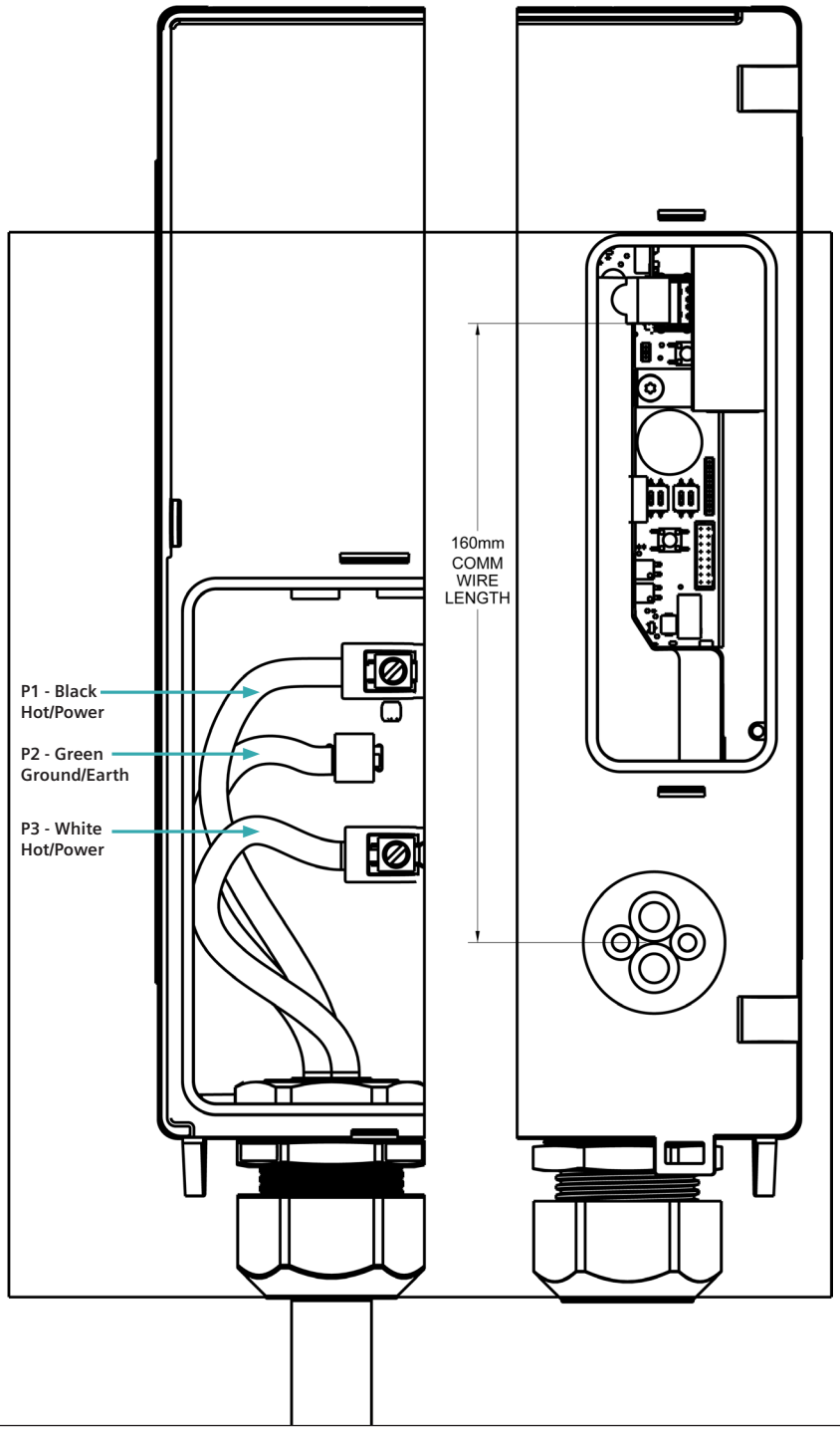
Figure 27. Hardwire installation schematic for advanced 40/48 a unit

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

Appendix D –Hardwire Bending Diagram

VersiCharge™ Wire Bending Diagram

For P/Ns:
8EM1312-5AF10-0AA3
8EM1312-5CF18-0FA3
8EM1310-4CF14-0GA0
8EM1310-5CF14-0GA0
8EM1310-4CF14-1GA1
8EM1310-5CF14-1GA1



A full-size wire bending diagram is supplied in the box. Find that, place the cable being wired to the unit on it and bend the wires to match the diagram. Insert the wires into the unit and tighten the connections (to 14.5 in-lbs.).

Notes:

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