

**SIEMENS**

INSTALLATION AND OPERATIONS MANUAL

# VersiCharge™ AC

## Electric vehicle charging station





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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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# Index

1	Safety Information	7
1.1	Read this First	7
1.2	Symbol Legend	7
1.3	Safety Instructions (General and Specific)	7
1.4	Instructions Pertaining to a Risk of Fire or Electric Shock	8
1.5	Code and Standard References	9
1.6	Product Labels	9
1.7	Definitions	10
2	Mounting Instructions	11
2.1	Equipment List	11
2.1.1	Kit Supplied Equipment	11
2.1.2	Standard Installation Equipment	11
2.1.3	Alternate Installation Equipment	11
2.2	Mounting Using a Stud – Recommended Stud Mounting	12
2.3	Alternate mounting—Wallboard mounting	13
2.4	Install VersiCharge	14
2.5	Secure Charger and Install cable holster	15
2.6	Check the system	16
3	For Professional Electricians	17
3.1	Outlet Installation Instructions	17
3.1.1	Removing the Cord-and-Plug Assembly	17
3.2	Amperage Adjustment	19
3.2.1	Dial Settings	20
3.2.2	Circuit Requirements	20
3.3	VersiCharge Units with a Remote Control Interface (Commercial Units)	21
3.4	SIM Card Installation – If Not Factory-installed (Commercial Parent Units Only)	22
3.5	Ethernet Connection – (Commercial and Smart Residential Units)	23
3.6	General Ethernet Network Connection Illustration	24
3.7	ModBus Communications Setup	24
3.7.1	ModBus RTU Connection – (Commercial Units Only)	24
3.7.2	ModBus Termination Switch Settings – (Commercial Parent/Child Units)	25
3.7.3	ModBus Termination Switch Settings – (Commercial Child units Only)	25
3.7.4	General ModBus RTU RS-485 wiring considerations	26
3.7.4.1	Setup Details (Using ModBus Poll as an example)	27
4	RFID Setup (Commercial Units Only)	30
5	Application Set UP	31
5.1	Mobile App User Registration – (Residential Units or Commercial-Single Charger)	31
5.1.1	Create an Account	31
5.2	Link Charger to Your Account (Commercial and Residential Units)	32
5.2.1	Sign In:	33
6	Configure/Commission VersiCharge Using the Configurator Tool (Use to Configure Multiple Chargers)	35
7	HMI	36
8	Operating VersiCharge	38
8.1	LED Light Display	39
8.2	VersiCharge Operation	42
8.2.1	Basic procedure	42

8.2.2. Start charging - RFID Feature	43
9 Maintenance	44
9.1 General exterior maintenance	44
9.2 General external checks	44
10 Warranty	45
10.1 Limited Warranty	44
11 Help!	47
Technical Data	48
Appendix A – Useful Links	49
Appendix B – Wiring Schematics for VersiCharge 40 A and 48 A VersiCharge Units	50
Appendix C – Hardwire Bending Diagram	51

# Figures

Figure 1. Align Mounting Bracket And Screw Into The Stud	12
Figure 2. Alternate Installation Of Versicharge Mounting	13
Figure 3. Slide Versicharge Onto Mounting Hinges	14
Figure 4. Close Versicharge	15
Figure 5. Secure the charger and mount the holster	15
Figure 6. Outlet ground facing down	17
Figure 7. Remove the plug	18
Figure 8. Hard wire VersiCharge	19
Figure 9. Amperage Dial Setting	19
Figure 10. Wire Remote Control Interface	21
Figure 11. Sim Card Installation	22
Figure 12. ModBus Tcp Ethernet Connection	23
Figure 13. Ethernet Connection Wiring	24
Figure 14. ModBus Connection	24
Figure 15. Termination Switch Setting For Parent/Child Units	25
Figure 16. Termination Switch Setting For Child Units Only	25
Figure 17. Serial Modbus Network Wiring Example	26
Figure 18. ModBus RTU setup	27
Figure 19. ModBus setup connection	28
Figure 20. ModBus read/write setup	28
Figure 21. ModBus read/write definition	28
Figure 22. ModBus – write register	29
Figure 23. ModBus – configure register address	29
Figure 24. Residential HMI	36
Figure 25. Commercial HMI	36
Figure 26. Hardwire installation schematic for advanced 40/48 a unit	36
Figure 27. Hardwire Bending Diagram	51

## SECTION 1

# Safety Information

## 1.1 Read this First

This manual contains 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 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.



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 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.
- 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.
- When a VersiCharge is hardwired during installation, power connections shall be made at line terminals with 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 48 A charger and #8 90°C copper wire should be used for a 40A charger.
 

**NOTE:** 1. Wire must have a temperature rating of 90°C or higher. 2. Do not set the amp switch higher than 40A (amp switch setting #4) unless hardwired to a dedicated 60A branch protection circuit breaker (48A 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, 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.

## SECTION 2

# Mounting Instructions

(See also VersiCharge Quick Start Guide at [usa.siemens.com/versicharge](http://usa.siemens.com/versicharge))

## 2.1 Equipment List

### 2.1.1 Kit Supplied Equipment

- 1 – VersiCharge (with optional NEMA 6-50 infrastructure plug for 40A Residential Units only)
- 1 – Mounting Bracket
- 1 – Cable Holster
- 1 – Ferrite Core **NOTE:** plug-supplied units (40A) 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: 2 Admin Cards and 5 User cards (Supplied with Commercial Units Only)
- 1 – Tamper resistant 5/32" Allen wrench (for securing 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)
- 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
- 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) **NOTE: Only** used with the 40A 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 1/4" Allen wrench (for securing the charger)
- If hardwiring charger – #6 AWG 90° C copper wire, 3 conductors – #6 AWG 90°C copper wire should be used for 48A charger and #8 AWG 90° C copper wire should be used for a 40A charger.  
**NOTE:** 1. Wire must have a temperature rating of 90°C or higher. 2. Do not set the amp switch higher than 40A unless hard wired 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 1-1/2 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 Stud Mounting – Recommended (Use center-top and bottom holes)

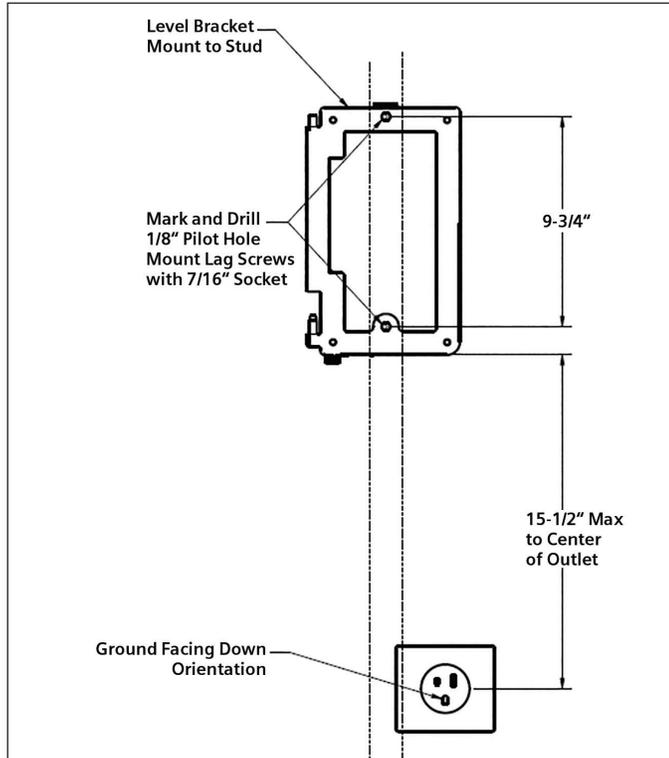


Figure 1. Align mounting bracket and screw into the stud



**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. 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 top and bottom screws securely using an Allen wrench.
- 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 the wall in compliance with all National Electrical Code® (NEC) and local jurisdiction requirements, using the 2 lag screws provided.
  - For Siemens Post installation, see the post instruction manual at: ([usa.siemens.com/versicharge](http://usa.siemens.com/versicharge))

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

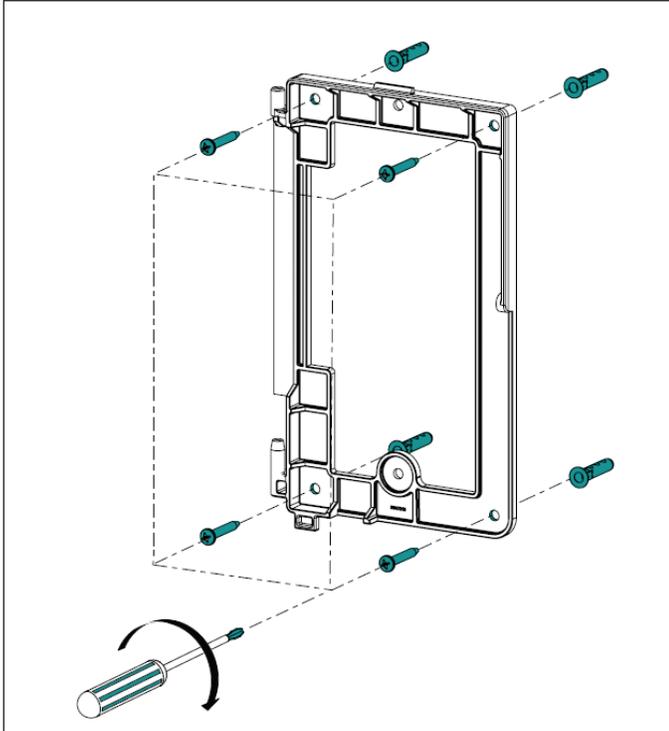


Figure 2. Alternate installation of VersiCharge mounting



**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 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. Refer to Section 2.5 and its graphic.

## 2.4 Install VersiCharge

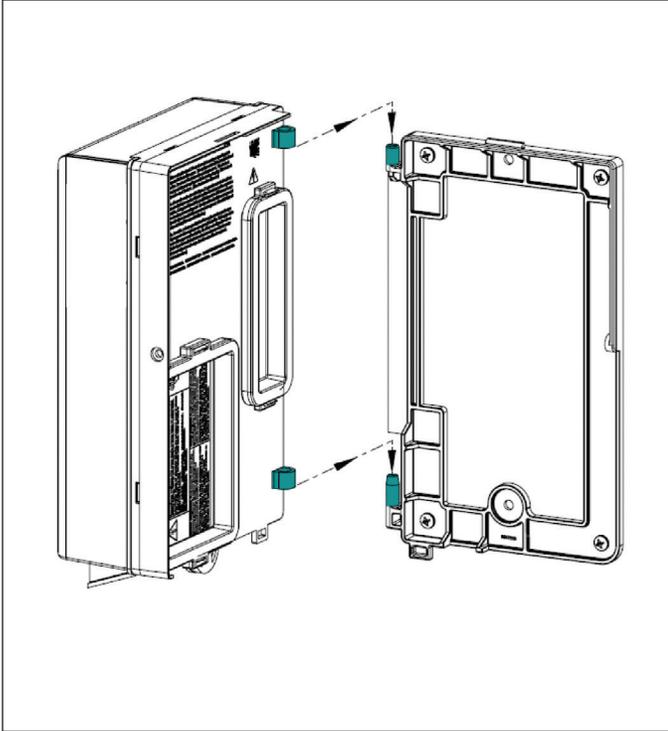


Figure 3. Slide VersiCharge onto mounting hinges



**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.

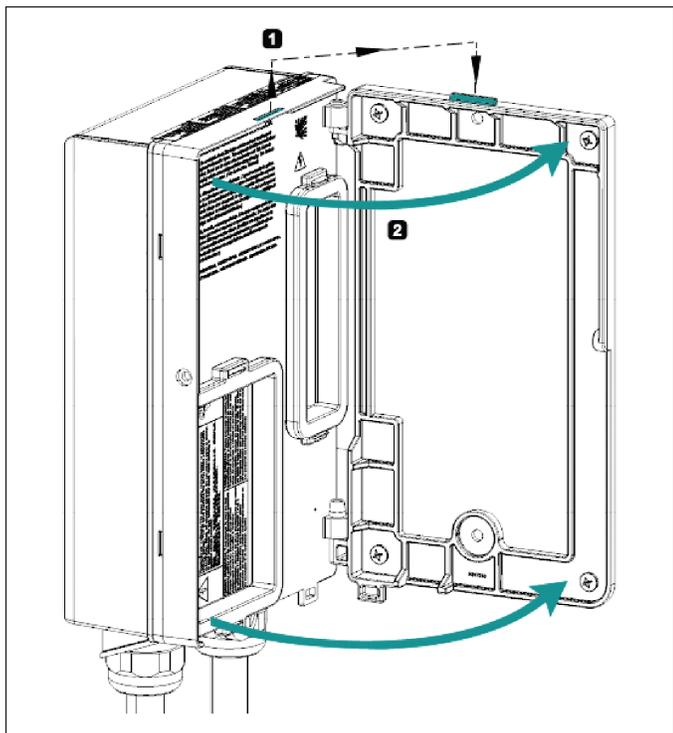


Figure 4. Close VersiCharge

## 2.5 Secure Charger and Install Cable Holster

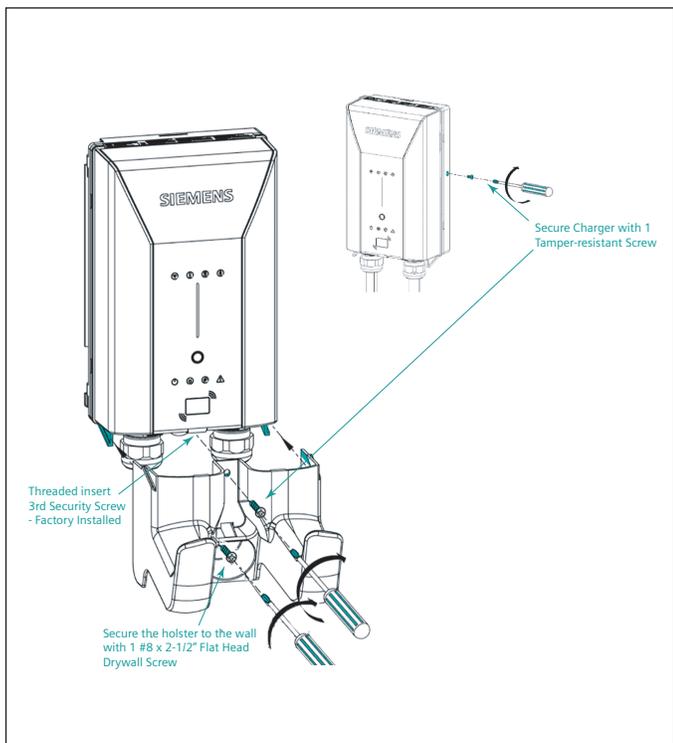


Figure 5. Secure the charger and mount the holster

1. Secure Charger to Mounting Bracket: Using the kit-supplied tamper-resistant screw– secure the charger cover with one screw on the side.
2. Install Holster to Charger: Align Holster with guides in charger and drill pilot hole. 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)
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 hole and use the fifth 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 LED Light Display table in Section 8.1.

Siemens VersiCharge Mobile App (Best used when only one charger is configured to one account): 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 (Best used when configuring multiple chargers per account): Download the VersiCharge Configuration Tool (PC App) at [usa.siemens.com/versicharge](http://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.

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 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.

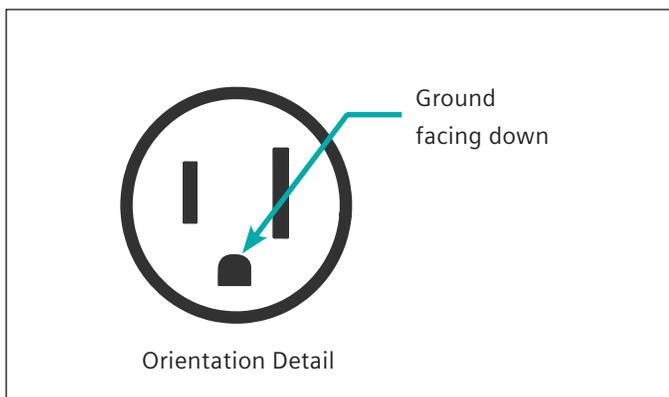


Figure 6. Outlet ground facing down

 **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 void the VersiCharge warranty.

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

Plug removal is only for the plug-supplied 40A units; 48A 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; 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.

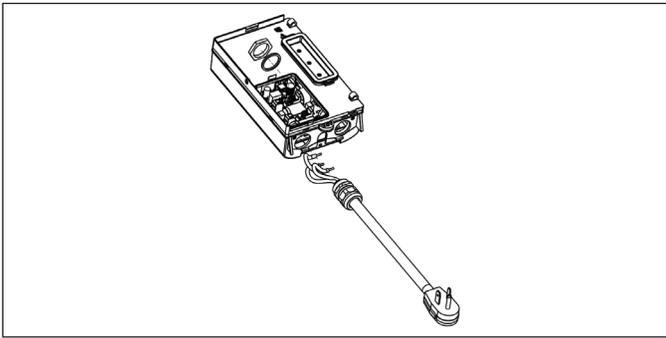


Figure 7. Remove the plug

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 8 (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 C for wire bending diagram.

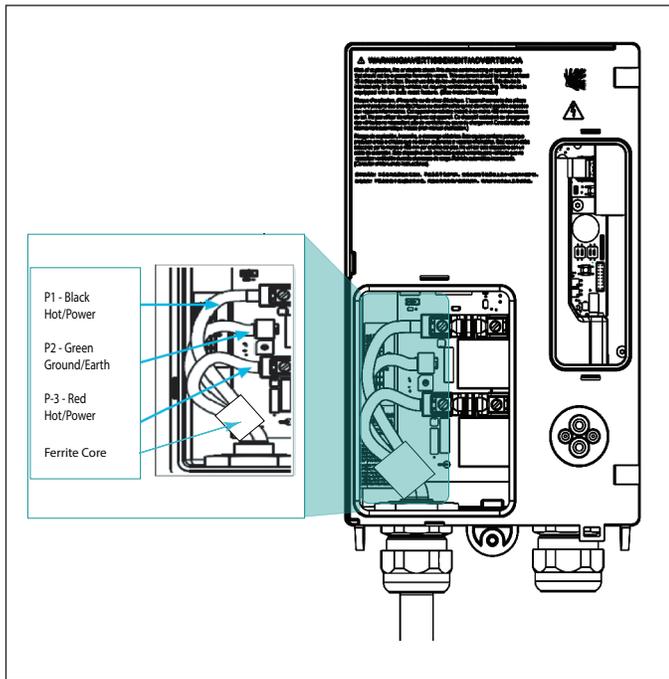


Figure 8. Hard wire VersiCharge

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.

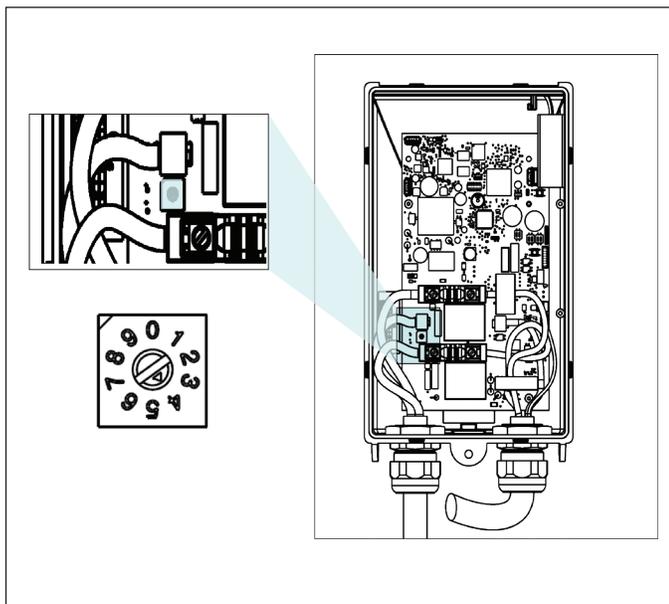


Figure 9. Amperage dial setting

The VersiCharge comes set to the maximum of the model purchased. For example, a 40 A model will come with the amp adjustment switch set to 4, and a 48 A unit amp adjustment switch will be set to 5. Verify the required amp adjustment switch setting based on the branch circuit protection (see the table below).



**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

NOTE: Do not set switch above the 40A unless hardwired via dedicated 60 A branch protection.

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 VersiCharge Units with a Remote Control Interface (Commercial Units)

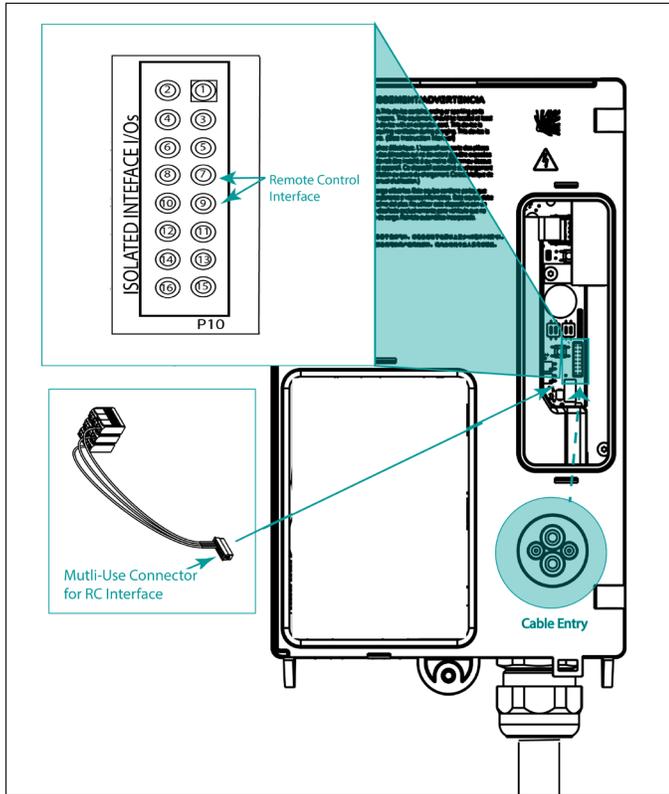


Figure 10. Remote control termination point



**WARNING!** Remote Control Interface should be low-voltage, control wiring (22AWG (.64mm)). 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 allows charging to be controlled by an external device by wiring a remote control interface to pins #7 and #9. 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, no charging will occur.



**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 – If Not Factory-installed (Commercial Parent Units Only)

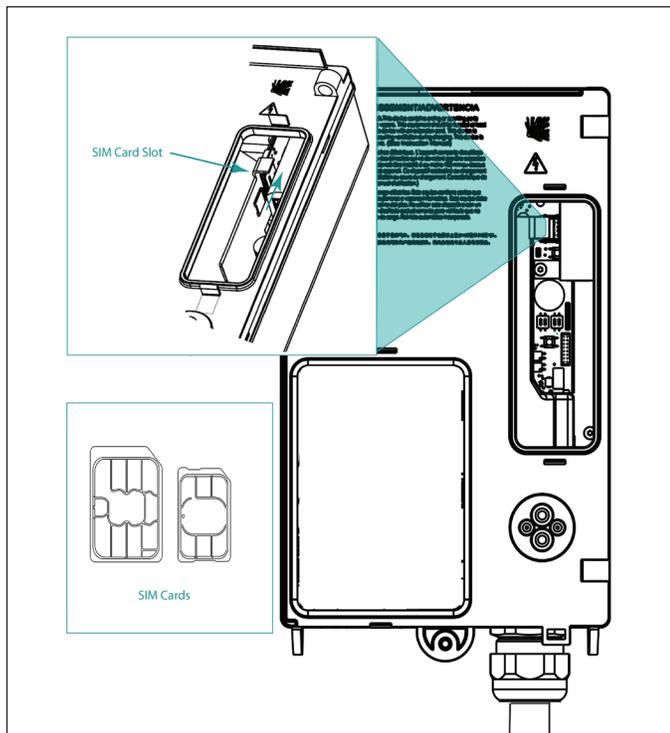


Figure 11. Sim card installation

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 : USA: AT&T, T-Mobile, and Canada: Rogers, Telus. 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 11 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 – (Commercial and Smart Residential Units)

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. The Ethernet can be used to commission/configure chargers and monitor charger activity on a daily basis (download the VersiCharge Configurator Tool (PC application) at [usa.siemens.com/versicharge](http://usa.siemens.com/versicharge)).

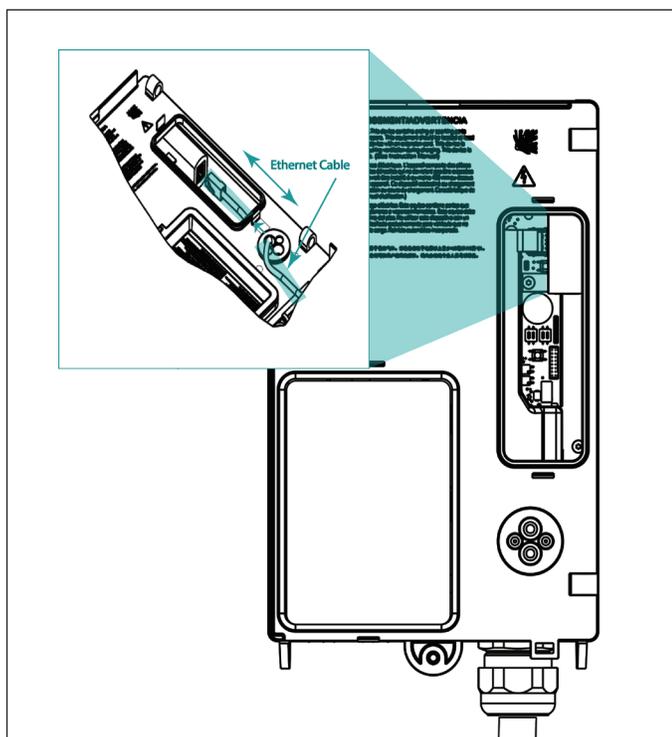


Figure 12. CAT6 Ethernet Port Connection



**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 RJ45 plug to the cable.
4. Insert the RJ45 plug from the bottom up into the Ethernet port.

## 3.6 General Ethernet Network Connection Illustration

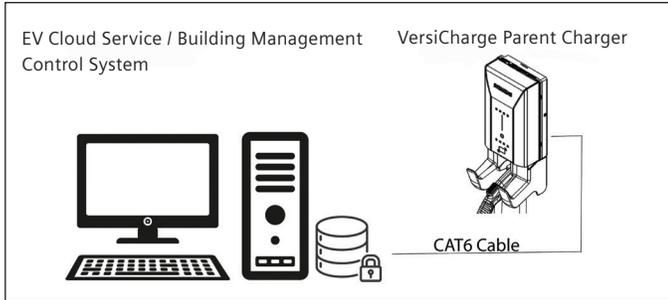


Figure 13. General Ethernet network connection illustration

## 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, initiating control actions.

### 3.7.1 ModBus RTU Connection (Commercial Units Only)

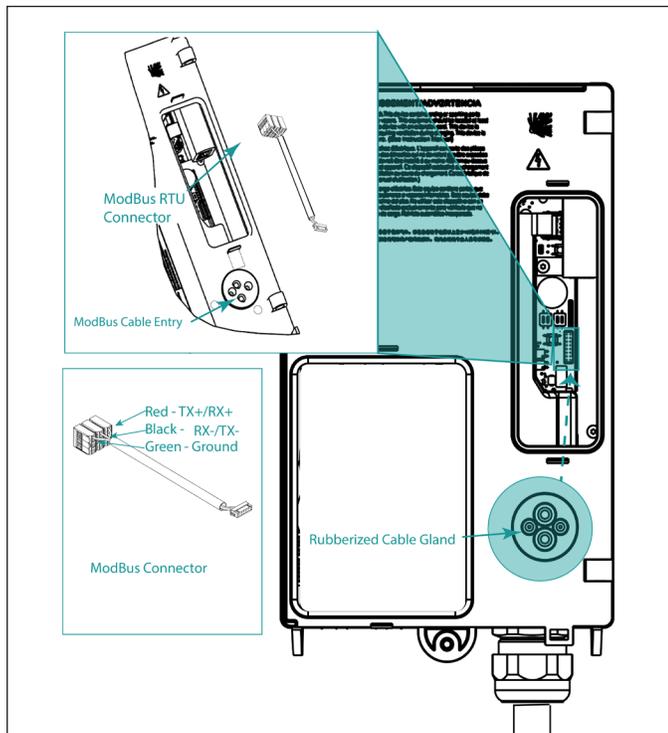


Figure 14. Multi-Use/ModBus connector



**NOTE:** Push the RS-485 wire through the Rubberized Cable Gland and then terminate the wires into the Multi-Use connector terminal block. This gland will not self-seal if the connector is pushed through the rubberized cable gland and the NEMA 4 rating will be lost.

1. Push the external ModBus RTU cable through the rubberized cable gland at the back of the charger (this will self-seal).
2. Attach the external ModBus cable wires to the internal (supplied) Multi-Use connector.

3. Gently tuck the wiring into the space and secure the back of the charger.
4. Download/install QModMaster or any other third-party software (<https://sourceforge.net/projects/qmodmaster/>) to test registers.



**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 (Commercial Parent/Child Units)

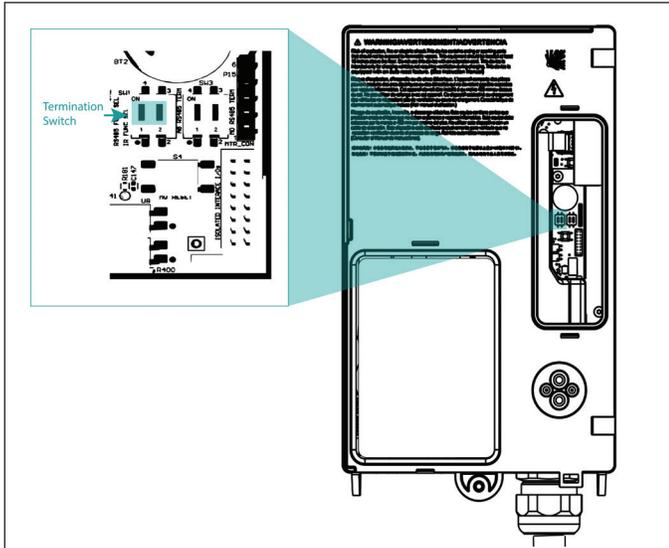


Figure 15. Termination switch setting for parent/child units

1. SW3-1 (left side) labelled 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 (Commercial Child units Only)

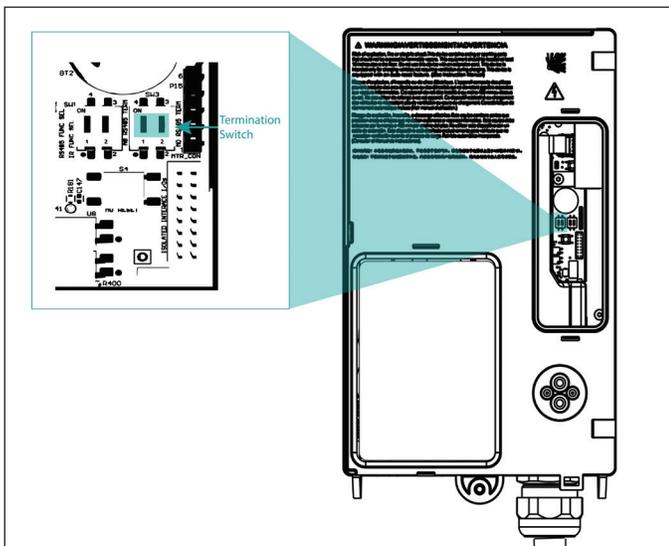


Figure 16. Termination switch setting for child units only

1. SW3-2 (right side) labelled 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 RS-485 wire, 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.

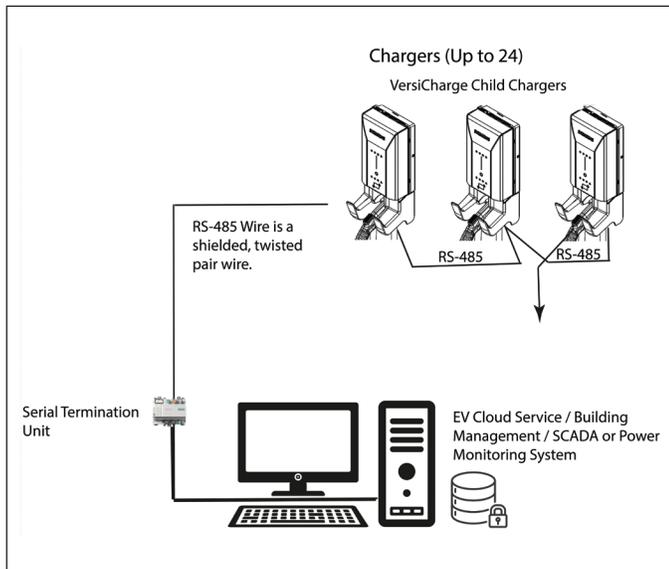


Figure 17. Serial modbus network wiring example

Setup for Modbus RTU communications see Figure 18.

### 3.7.4.1 Setup Details (See example below)

- 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.

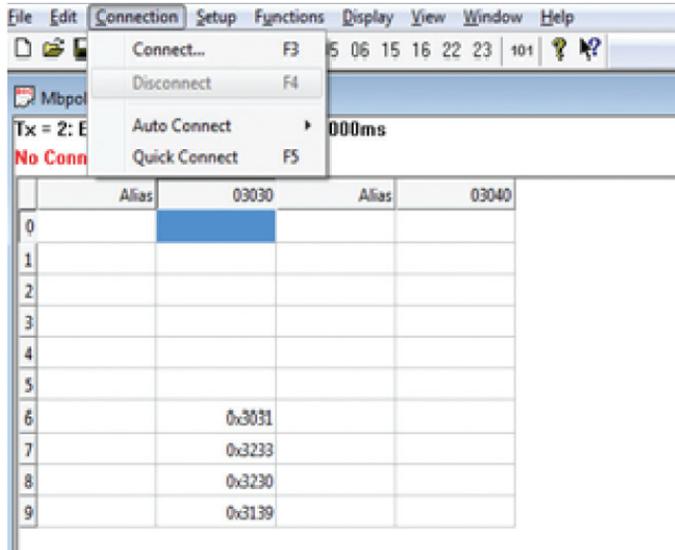


Figure 18. ModBus RTU setup

- 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

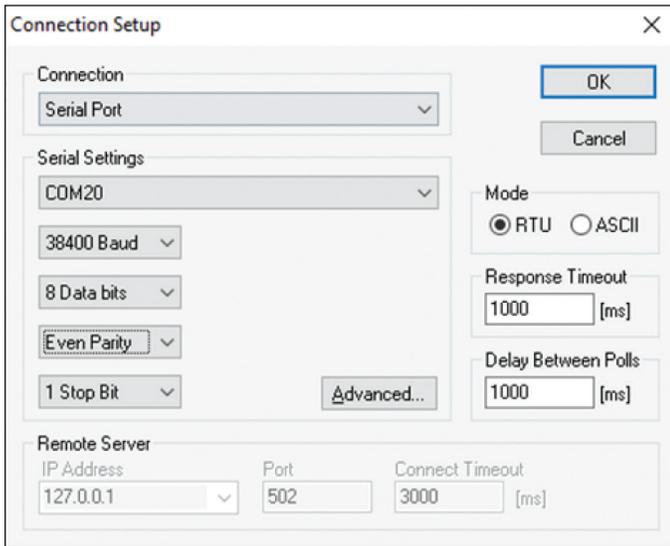


Figure 19. ModBus setup connection

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

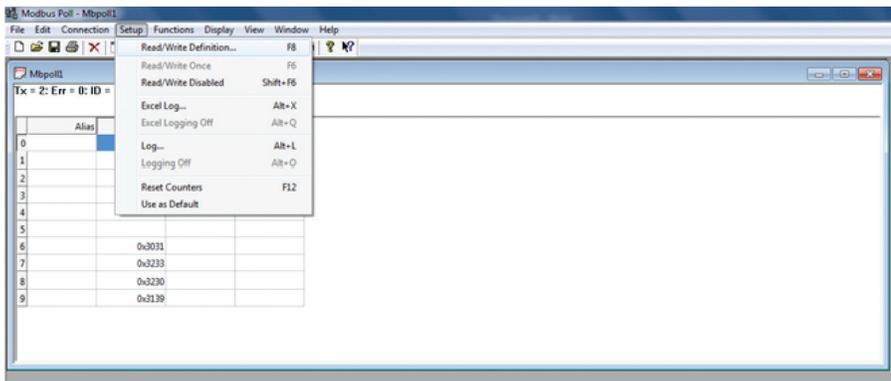


Figure 20. ModBus read/write setup

f. Read Operation: Enter the register to be read in the Address box, the 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.

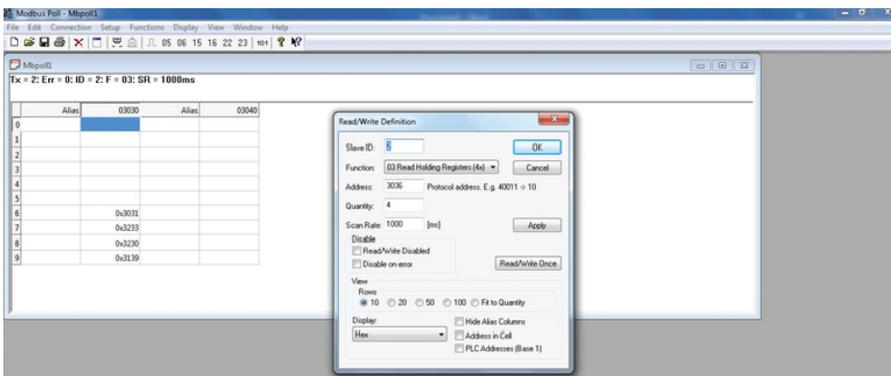


Figure 21. ModBus read/write definition

g. Write Operation:

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

## VersiCharge™ AC Electric vehicle charging station

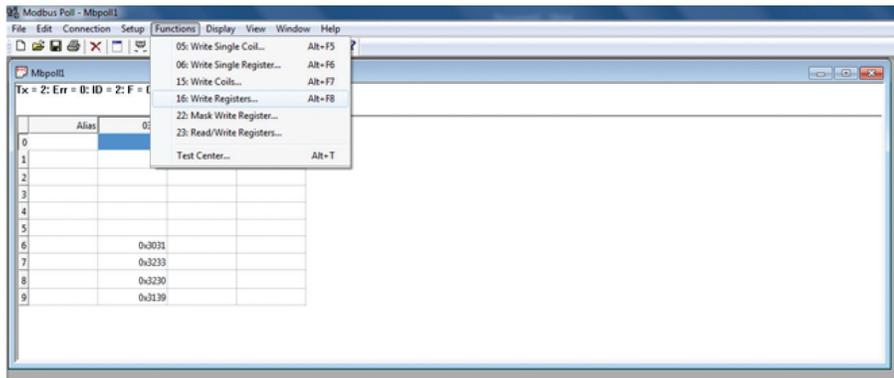


Figure 22. ModBus – write register

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

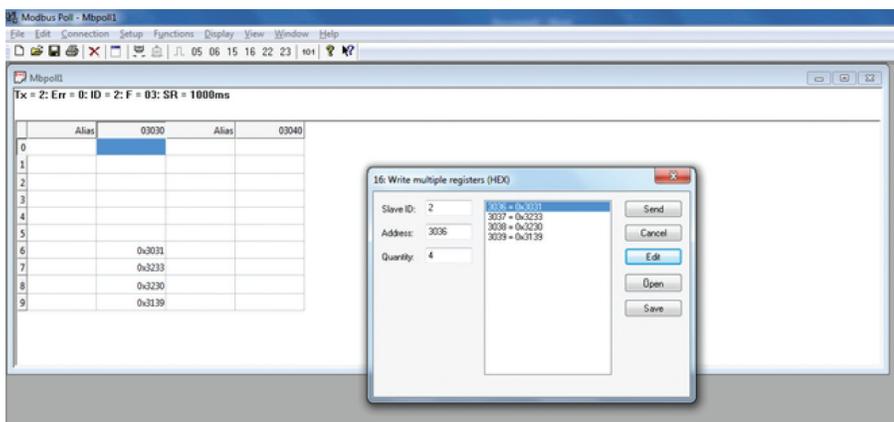


Figure 23. ModBus – configure register address

SECTION 4

# RFID Setup (Commercial Units Only)

## RFID Cards Supported by VersiCharge

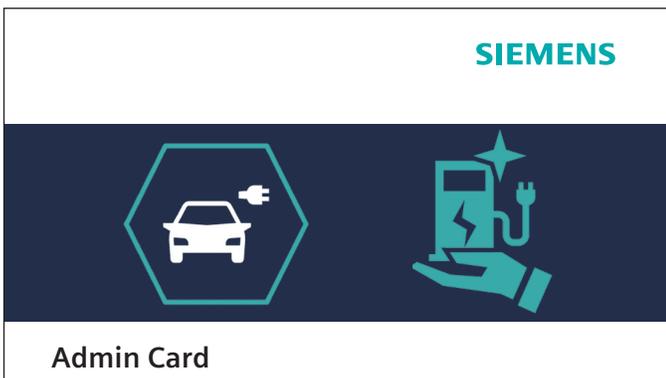
Cards Family	Memory	Security	Protocol Support
MIFARE Classic	1K, 4K	Crypto1	ISO14443A Part 1-3
MIFARE Plus	1K, 2K,4K	AES, Crypto1	ISO14443A Part 1-4
MIFARE DESFire	2K, 4K, 8K	AES, 3DES	ISO14443A Part 1-4
MIFARE Ultralight	40,48,128,144	None, 3DES	ISO14443A Part 1-3

RFID functionality is an available feature for commercial units only. 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. 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 two audible tones, decreasing if card swipe is unsuccessful.

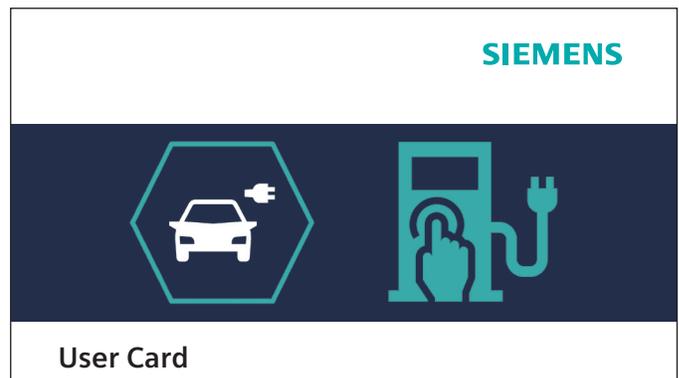
RFID State	Description
RFID Swipe Successful	Charging LED ON/Blinking. White #2, #4, #6 & #8 every 1/4 second in incremental pattern starting from 0.25S, 0.5S,0.75S and 1S. Repeat 2 times. Audible single beep tone.
RFID Swipe not successful	Charging LED OFF. White #2, #4, #6 & #8 one Second in decremented 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 and RFID cards must be managed by the OCPP server through the "Local Auth List Management" profile.) 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.



NOTE: Admin cards are **only** used to add/remove user cards to the system when RFID is enabled.



NOTE: User cards are necessary to begin charging when RFID is enabled.

SECTION 5

# Application Set Up

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

- Smartphone Application.** This is the preferred method for VersiCharge residential charger owners when one charger is linked with one user account. 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.
- PC Application.** Using a PC, control and monitor with the VersiCharge Configuration Tool. The VersiCharge Configuration Tool has been designed to allow commissioning of multiple chargers as well as the configuration of parent/child networks.



**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.

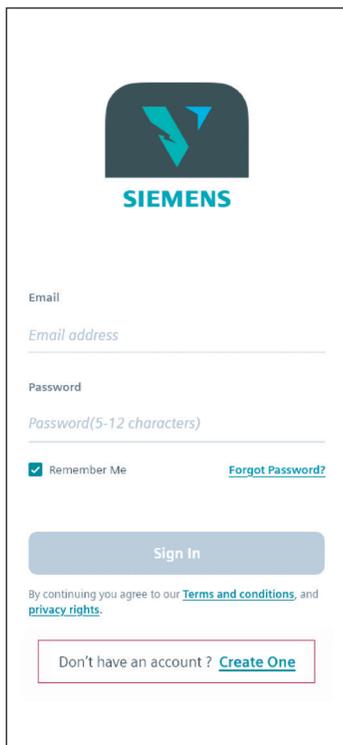
## 5.1 Mobile App User Registration (Residential Units or Commercial-Single Charger) Installations Only – See FAQs for Mobile App Details at [usa.siemens.com/versicharge](https://usa.siemens.com/versicharge)



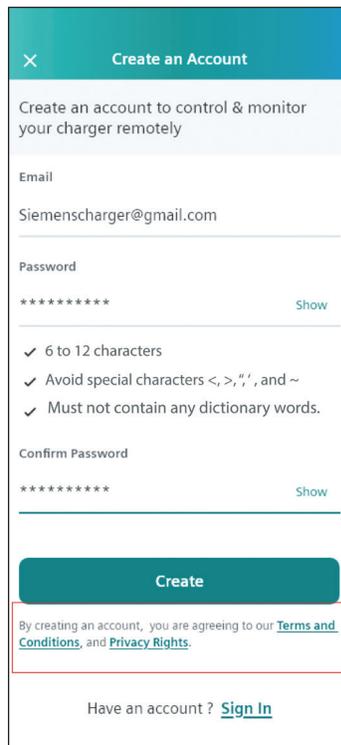
**NOTE:** If the charger is moved or ownership changes, it must be deregistered prior to recommissioning. Deregistering the unit can be done through the mobile app or VersiCloud for multiple chargers.

- 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 (<https://www.versichargesg.com>) 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.

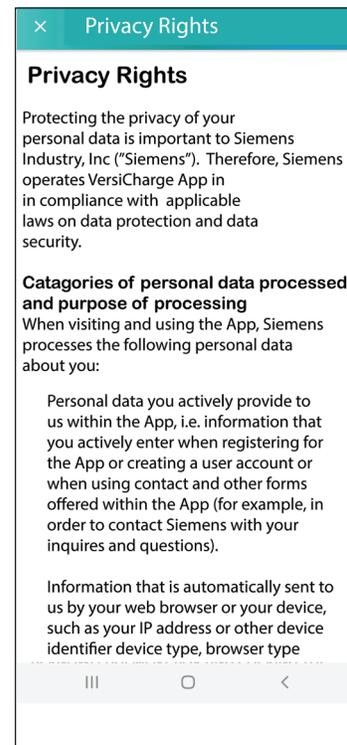
### 5.1.1 Create an Account



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 allowed: !, \$, \_, and –
- Password: Minimum of five characters with suggested maximum of 12 characters, avoid special characters (<, >, ", ', and ~)

## 5.2 Link Charger to Your Account (Commercial and Residential Units)



**NOTE:** If a charger is moved to another network or if ownership is changed, the charger must be deregistered before recommissioning. The charger will not automatically commission to a new network, but remembers the initially commissioned network.

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 6 to link your charger to your account and manage your charger using the Mobile App.



**NOTE:** Residential 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	Red	
Software running	Yellow	
Charger in Access Point (AP) mode		
Receiving connection credentials		
Received connection credentials	Green	
Connecting to network	Green	
Connected to network	Green	Green
Connecting to VersiCloud	Blue	
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 or create an account by selecting "Create One".



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



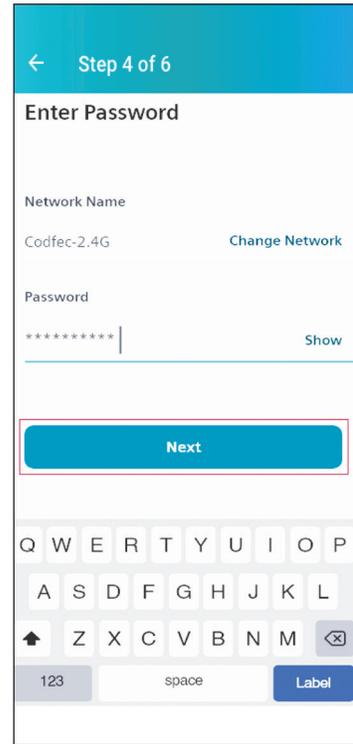
Step 1 – Check the Wi-Fi Light – it should be blinking white.  
Select Next.



Step 2 – Select the charger with vs-xxxxxxxxxx.



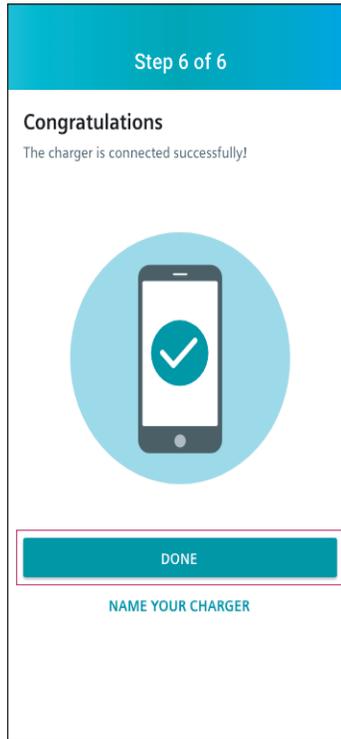
Step 3 – Choose a Network by clicking on the network.



Step 4 – Enter Password for the network. Note: Passwords are case sensitive and network passwords **cannot** contain special characters.



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.

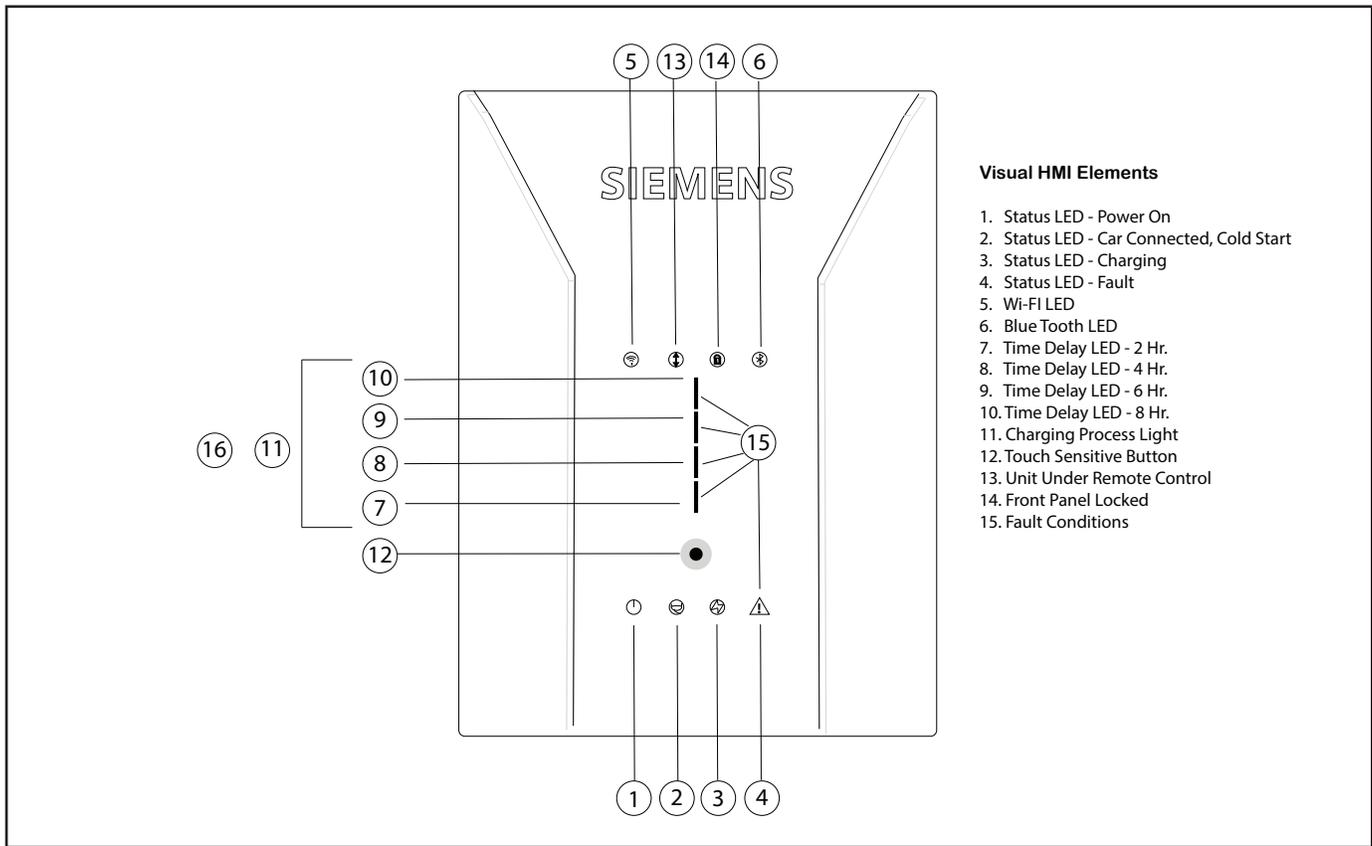
SECTION 6

# Configure/Commission VersiCharge Using the Configurator Tool (Use to Configure Multiple Chargers)

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

SECTION 7

HMI

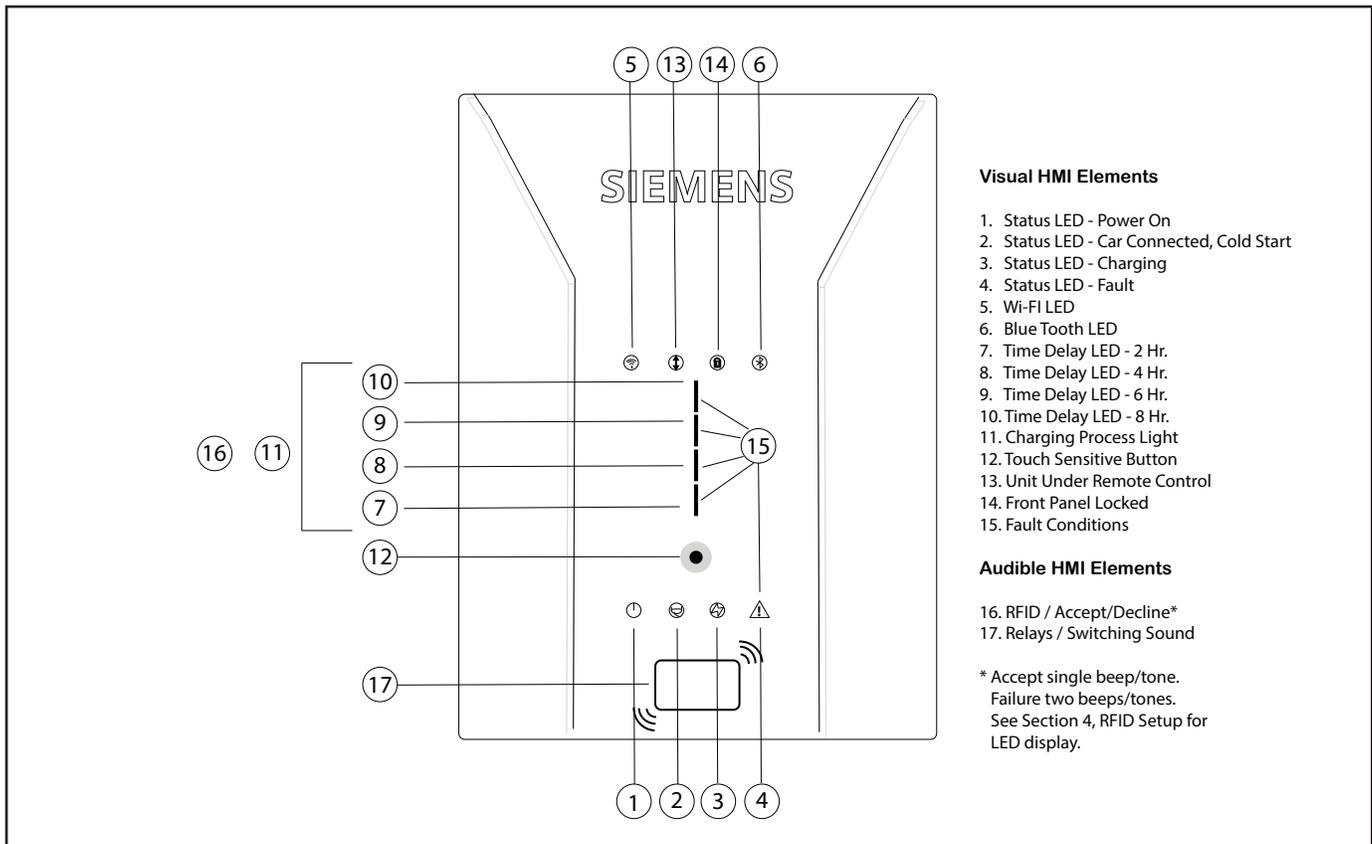


**Visual HMI Elements**

- 1. Status LED - Power On
- 2. Status LED - Car Connected, Cold Start
- 3. Status LED - Charging
- 4. Status LED - Fault
- 5. Wi-Fi LED
- 6. Blue Tooth LED
- 7. Time Delay LED - 2 Hr.
- 8. Time Delay LED - 4 Hr.
- 9. Time Delay LED - 6 Hr.
- 10. Time Delay LED - 8 Hr.
- 11. Charging Process Light
- 12. Touch Sensitive Button
- 13. Unit Under Remote Control
- 14. Front Panel Locked
- 15. Fault Conditions

Figure 24. Residential HMI

NOTE: Number of LEDs may change based on specific part number and features.



**Visual HMI Elements**

- 1. Status LED - Power On
- 2. Status LED - Car Connected, Cold Start
- 3. Status LED - Charging
- 4. Status LED - Fault
- 5. Wi-Fi LED
- 6. Blue Tooth LED
- 7. Time Delay LED - 2 Hr.
- 8. Time Delay LED - 4 Hr.
- 9. Time Delay LED - 6 Hr.
- 10. Time Delay LED - 8 Hr.
- 11. Charging Process Light
- 12. Touch Sensitive Button
- 13. Unit Under Remote Control
- 14. Front Panel Locked
- 15. Fault Conditions

**Audible HMI Elements**

- 16. RFID / Accept/Decline\*
- 17. Relays / Switching Sound

\* Accept single beep/tone.  
Failure two beeps/tones.  
See Section 4, RFID Setup for LED display.

Figure 25. Commercial HMI

NOTE: Number of LEDs may change based on specific part number and features.

## VersiCharge™ AC Electric vehicle charging station

- 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 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.

SECTION 8

# Operating VersiCharge

## 8.1 LED Light Display

Display	Description	Action
<b>Normal Operation</b>		
 Applicable to Commercial units, only if RFID is enabled.	Charger is locked.	Pass RFID card in front of reader to unlock and begin charging.
 Applicable to Commercial units, if RFID is enabled.	Charger is unlocked	Enable RFID authentication. To unlock pass an RFID card over the RFID reader.  NOTE: The charger is in the unlocked state by default.
 Lights up white	Charging station is ready	
 LED off	Charging Paused.	Charging can be resumed through the Mobile App.
 Lights up white	Vehicle connected	
 Lights up white	Charging in progress	
 Flashes white	After switch on, the charger will go to Access Point mode	Connect PC or mobile device for commissioning, charger is ready to be added to the account
 Lights up red	No Wi-Fi	Check the router
 Lights up orange	Charger is connected to router. Weak Wi-Fi.	Strengthen the Wi-Fi.

Display	Description	Action
<b>Normal Operation</b>		
	Charger is connected to router. Strong Wi-Fi.	
Lights up green		
	Attempting to connect to VersiCloud	
Flashes blue		
	Ready (with successful connection and registration in VersiCloud)	
Lights up white		
	Access blocked	Unlock via RFID/ OCPP/MODBUS /Mobile App
	2 h delay	Wait until charging process starts.
Flashes white		
	4 h delay	Wait until charging process starts.
Flashes white		
	6 h delay	Wait until charging process starts.
Flashes white		
	8 h delay	Wait until charging process starts.
Flashes white		
	Press Touch Sensitive Button to add a time delay.	Press the Touch Sensitive button once for 2 hour delay, twice for 4 hour delay, three times for 6 hour delay and four times for 8 hour delay.

Display	Description	Action
<b>Fault Status</b>		
	<p>Press the Touch button for 5 seconds for maximum charging power</p> <p>Press once for ground fault reset.</p>	Power presetting is set to the maximum for the charging process.
	<i>A fault has occurred.</i>	The device is in a fault state. Eliminate the fault and then push the touch button and hold for 5 seconds to reset.
Ground fault	<i>A fault has occurred.</i>	Turn the supply voltage off and on again.
	<i>A fault has occurred.</i>	Turn the supply voltage off and on again.
Flashes red	<i>A fault has occurred.</i>	Error code: 001. Notify Technical Support.
	<i>A fault has occurred.</i>	Error code: 001. Notify Technical Support.
	<i>A fault has occurred.</i>	Error code: 002. Notify Technical Support.
Lights up red	<i>A fault has occurred.</i>	Error code: 002. Notify Technical Support.
	<i>A fault has occurred.</i>	Error code: 003. Notify Technical Support.
Lights up red	<i>A fault has occurred.</i>	Error code: 003. Notify Technical Support.
	<i>A fault has occurred.</i>	Error code: 004. Notify Technical Support.
Lights up red	<i>A fault has occurred.</i>	Error code: 004. Notify Technical Support.
	<i>A fault has occurred.</i>	Error code: 005. Notify Technical Support.
Lights up red	<i>A fault has occurred.</i>	Error code: 005. Notify Technical Support.

Display	Description	Action
<b>Fault Status</b>		
	<i>A fault has occurred.</i>	Error code: 006. Notify Technical Support.
Lights up red		
	<i>A fault has occurred.</i>	Error code: 007. Notify Technical Support.
Lights up red		
	<i>A fault has occurred.</i>	Error code: 008. Notify Technical Support.
Lights up red		
	<i>A fault has occurred.</i>	Error code: 009. Notify Technical Support.
Lights up red		
	<i>A fault has occurred.</i>	Error code: 0010. Notify Technical Support.
Lights up red		
	Random delay between 1-5 minutes on power cycle if EV is connected. EVSE will resume charging after delay expires	No Action.
Cold Start - Lights up steady white.		

## 8.2 VersiCharge Operation

### Safety instructions during the charging process



**DANGER** Risk of electric shock and fire. Touching live parts may cause electric shock or even death. Defective connectors or cables may cause fire.

- Do not kink or squeeze the charging cable. Do not draw the charging cable over sharp edges or hot surfaces.
- Do not use the charging station if damage or tampering is visible. If damage is visible, Inform the operator. Until damage is repaired, keep away from the charging station and do not attempt to charge an EV.
- Grip the power plug/connector to disconnect from the charging unit. Do not remove the connector by pulling on the cable.
- Never touch the power plug/connector with wet hands.
- Do not connect or disconnect any cables during a thunderstorm.

### Risk of overheating and fire

Unauthorized accessories should not be used with the VersiCharge due to risk of fire and/or overheating.

- DO NOT use a charging cable that is not approved for the vehicle.
- DO NOT use an extension to connect the charging station to the vehicle.
- DO NOT use an adapter or adapter cable.



**CAUTION!** Risk of accident. Ensure that the charging cable does not block an exit or pose a tripping hazard. Ensure the cable cannot be ripped out of the charging station.

### 8.2.1 Basic procedure

- Using the charger connector, gently insert the connector into the EV. Be sure not to force the connection or bend any pins in the connector.
- Check the charger "Lock" light (see Figure 25-commercial chargers only), when lit, the front panel is locked and will not begin charging. Pass a User RFID card in front of the reader to unlock and begin charging. The "Lock" light will be off.  
RFID authentication is successful when the Charging Process Light flashes twice from the bottom up, and there is an audible tone. RFID authentication is not successful when there are two audible tones.
- If RFID authentication is successful, charging will begin automatically.
- If delay is needed, press the Touch Sensitive button once for 2 hour delay, twice for 4 hour delay, 3 times for 6 hour delay and four times for 8 hour delay. Once the delay is selected, charging will begin automatically after the delay countdown.

**NOTE:** The delay function is not supported using the Touch Sensitive button if the charger is configured for OCPP communication, or if RFID is enabled.

Set delay by pressing the Touch Sensitive button or by using the mobile app.



## VersiCharge™ AC Electric vehicle charging station



Press 1x for 2 Hr. Delay



Press 2x for 4 Hr. Delay



Press 3x for 6 Hr. Delay



Press 4x for 8 Hr. Delay

**NOTE:** The LED bar display indicates that current is flowing to the vehicle and the vehicle battery is charging. The LED bar display is off in the following cases:

- The vehicle is not drawing power.
  - The charging unit pauses, for example, because of load management
  - The vehicle pauses the charging
- Charging completed.
  - Once charging is completed, the “Ready” status light turns off:



- Carefully remove the connector from EV and stow the cable in the cable holster to prevent damage to either the cable or connector.

### 8.2.2. Start charging - RFID Feature

Proceed as follows to begin charging:

- Check that the charger is ready for operation: The Power LED must be lit and white.
- Register RFID card on the device.
  - If the RFID function is activated on your device, hold your RFID card in front of the card reader. An acoustic signal is emitted.
  - Register on the device with a method supported by the operator, for example via an app.
- Open the EV connection cover and insert the charger connector into EV socket. Make sure that the connector pins are not bent or damaged before inserting into the EV socket.
- The device locks the plug into the socket. The “Vehicle connected” LED lights up.

**NOTE:** LED lights indicate the charger status:



Vehicle connected. LED lights up white.



Charging in progress. LED lights up white.



Charging completed.  
Charger is ready. LED lights are off.

After successful authorization, charging will begin automatically unless a delay has been set.

**NOTE:** The communication connection to the vehicle is established. This process may take some time depending on the connection speed and response speed of the backend (e.g. VersiCloud) and vehicle.

**SECTION 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.

## SECTION 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 ([usa.siemens.com/versicharge](http://usa.siemens.com/versicharge)). 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.

SECTION 11

# Help!

Call us any time, any day at: 1- 800-333-7421 or Email us at: [helpline.sii@siemens.com](mailto: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 (40A) - requires a 50A breaker, or 11.5kw (48A) - requires a 60A breaker
Mounting options	Wall and post mounting, see accessories
Touch Button	Time delay, return to max power level, reset ground fault
Charging status LEDs	Power, time delay, charging state, reduced power level, authentication, cold start
Communication status LEDs	Connected / not connected during operation, signal strength during commissioning
Parent/child Network:	Connects up to 9 child units by Wi-Fi (100 ft line of sight)
Load management	via OCPP or via Modbus

**Communication**

Interfaces	Ethernet, Wi-Fi, Modbus RS-485, Modbus TCP/IP, for parent units additionally LTE, WCDMA
User authentication	RFID (local Whitelist, MiFare)
Configuration	via Siemens mobile app or the PC Configuration tool
Back-end protocol	OCPP 1.6, upgrade-able to OCPP 2.0.1
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 (90° C rated wire)
Network type	Single phase / split phase
Energy metering	Embedded metering, +/- 1% accuracy
Ground fault protection	20 mA
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 8
Dimensions (HxWxD)	16.10 in x 7.09 in 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

		Max. current	Model number	Wi-Fi and Ethernet	Modbus RTU / TCP	RFID identification	Embedded metering	LTE WCDMA	Installed SimCard
Residential version	Smart	40 A	8EM1312-4CF18-0FA3	✓	-	-	✓	-	-
		48 A	8EM1312-5CF18-0FA3						
Commercial versions	Child	40 A	8EM1310-4CF14-0GA0	✓	✓	✓	✓	-	-
		48 A	8EM1310-5CF14-0GA0						
	Parent	40 A	8EM1310-4CF14-1GA1	✓	✓	✓	✓	✓	-
		40 A	8EM1310-4CF14-1GA2						
		48 A	8EM1310-5CF14-1GA1						
		48 A	8EM1310-5CF14-1GA2						

Back-end protocol: OCPP 1.6, upgradeable to OCPP 2.0.1

**Data plans for chargers:** Siemens offers chargers with data plans for customer convenience. See table below for data plans.

Description	Catalog Number
AT&T 1 year data plan, 2GB capped monthly bandwidth (supports ONE Parent charger).	P3R77992000784
AT&T 1 year data plan, 5GB capped monthly bandwidth (supports ONE parent charger and up to 9 commercial child chargers). This is a yearly fee that Siemens will bill direct after year one.	P3R77992000800
Extended Warranty per Level 2 charger - 1 additional year, No In/Out services	US2:VCEXWAR1YR
Extended Warranty per Level 2 charger - 2 additional years, No In/Out services	US2:VCEWAR2YR

## APPENDIX A

# Useful Links

- Register the VersiCharge Hardware at: <https://emobility.siemens.cloud/register/>
- If you don't have an existing account, before commissioning chargers, create an account in VersiCloud -use the following link and click "Register" or use the Mobile App to create a new account: <https://www.versichargesg.com/Account/Login?ReturnUrl=%2f>
- Deregister a charger whose ownership has changed, or when it is moved to another network, by logging into the following link and finding the charger and selecting "Deregister": <https://www.versichargesg.com>
- Download the Mobile App at the following links Recommended for Residential installations:
  - Android - <https://play.google.com/store/apps/details?id=com.siemens.VersiChargeSG>
  - iOS - <https://apps.apple.com/us/app/versicharge/id989742892>
- Download the VersiCharge Configuration Tool (PC application). Recommended for Commercial installations. <https://assets.new.siemens.com/siemens/assets/api/uuid:e2ab1265-3049-455f-bfc0-1a666b4b76f1/versichargeconfiguratorsetup1-1-2.zip>
- Find the following at: [usa.siemens.com/versicharge](https://usa.siemens.com/versicharge)
  - Configure your VersiCharge
  - VersiCharge Frequently Asked Questions
  - Detailed VersiCharge Installation and Operating Manual, as well as all legal and warranty information.
  - VersiCharge AC Series ModBus Manual
  - VersiCharge AC Series Post Installation Manual UL
  - Open Source Report: Product Clearing report for 3rd party SW components
  - End User License Agreement (EULA)
  - Privacy Rights

APPENDIX B

# Wiring Schematics for VersiCharge 40 A and 48 A VersiCharge Units

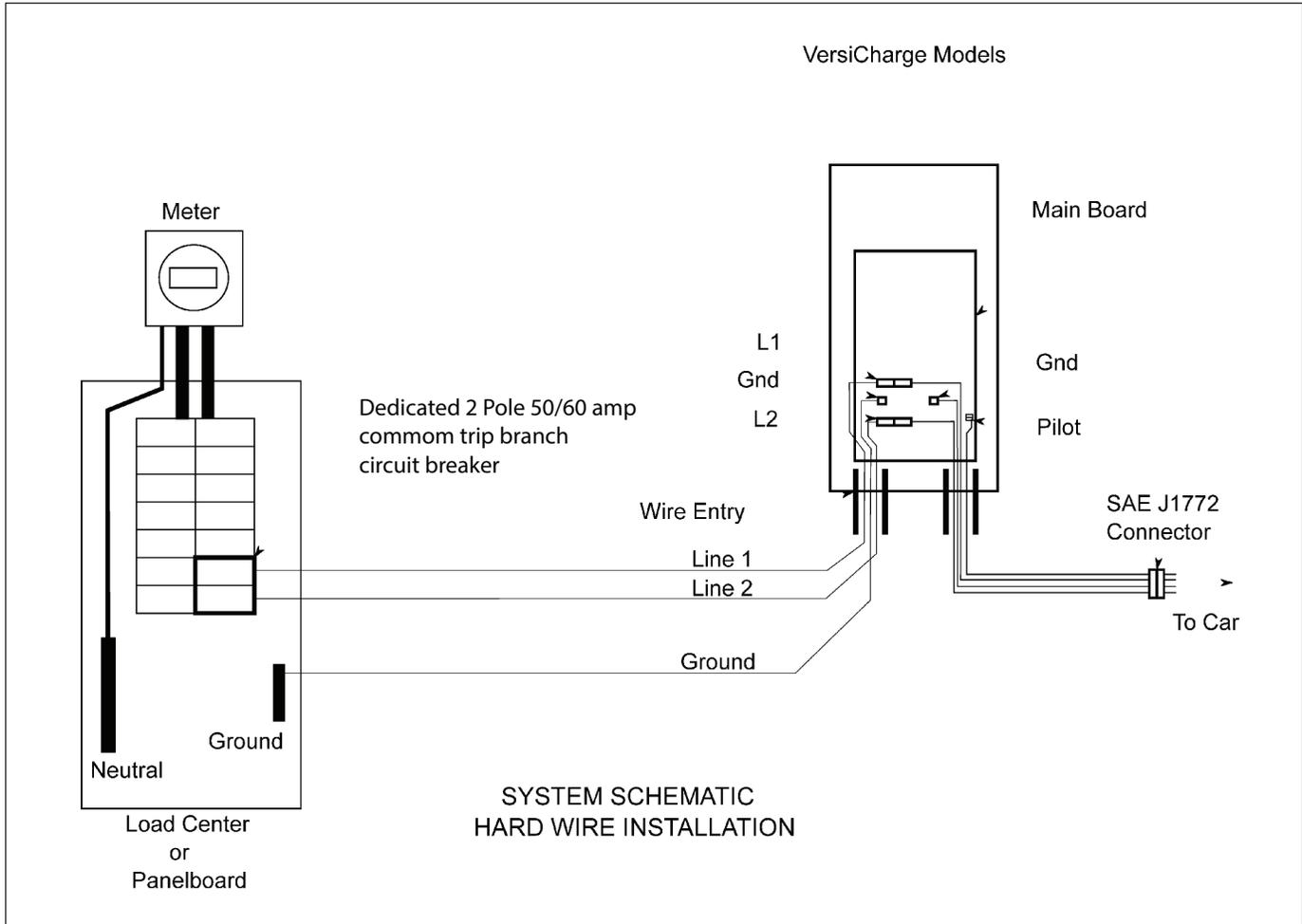


Figure 26. Hardwire installation schematic for advanced 40/48 a unit

**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. Also, the wiring should not be exposed to any conditions that could potentially damage wiring or cause a potential hazard.

APPENDIX C

# Hardwire Bending Diagram

## VersiCharge™ Power Wire Bending Diagram

Applicable to hardwired units only.

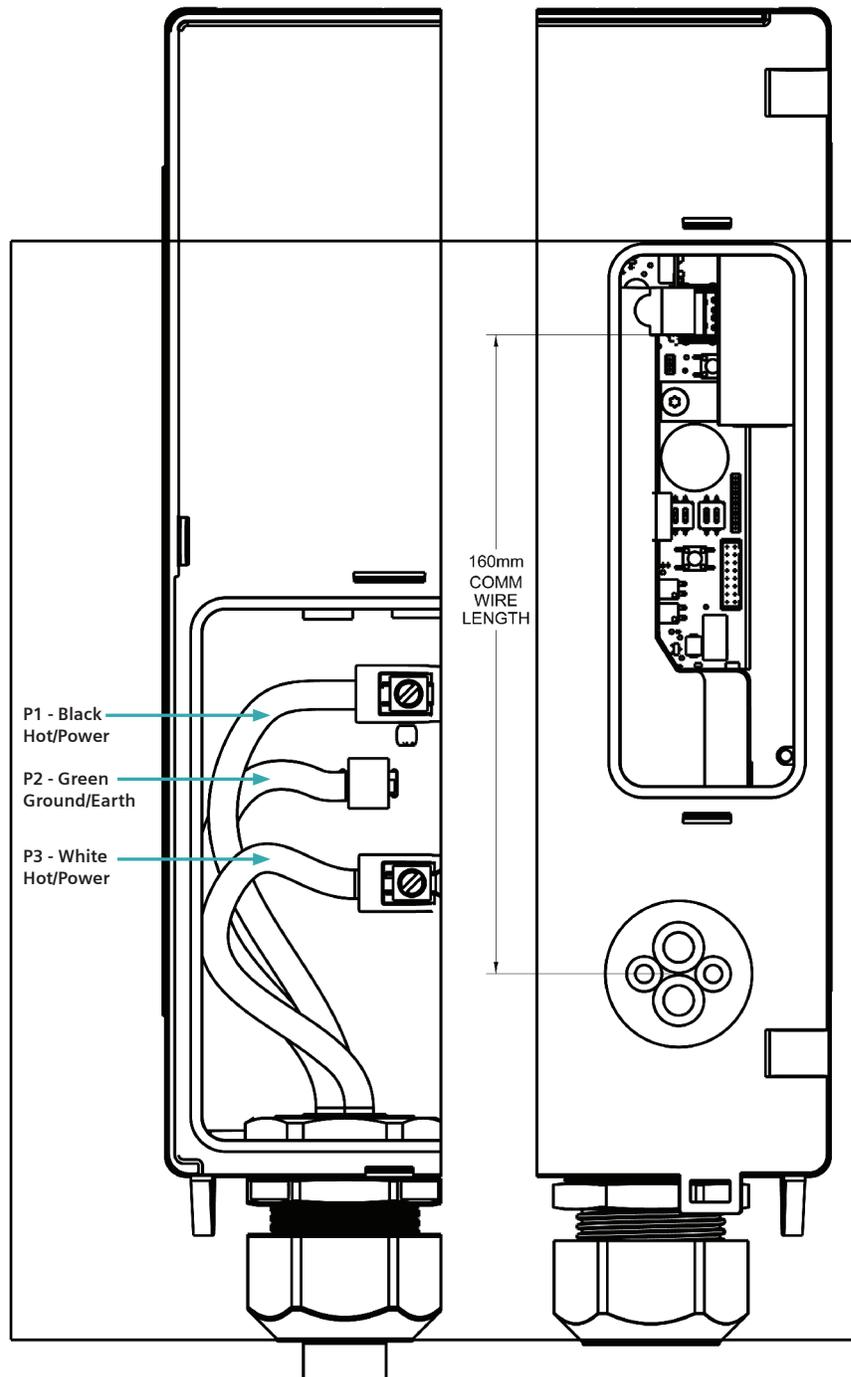


Figure 27. Hardwire Bending Diagram

A full-size wire bending diagram is supplied in the box. Find that, place the cable (22AWG (.64mm)) 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.).



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