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Installation and Operations Manual

Siemens VersiCharge SG™

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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 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 the 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.

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 Appendix on page 40 of this manual.

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1 Important Safety Information

1.1 Read this First

This manual contains important instructions for use during installation, operation and maintenance of the Siemens VersiCharge™ SG 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™ SG, 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 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 device before working inside.

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.

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Indicates connection point for Ground conductor.

1.4 Definitions

The term **EV** used in this manual refers to an electric vehicle.

The term **AC** used in this manual refers to alternating current.

The term '**VersiCharge SG**' unit refers to any Wi-Fi enabled VersiCharge SmartGrid unit with a plug and cord assembly attached, i.e. part number VCSG30GRYUW (Indoor / Outdoor Use). The SmartGrid (SG) term in this product description refers to the capability of this unit to respond to demand response events and operate on a schedule synched with the power company's capacity constraints. The owner of a VersiCharge SG unit can cancel or opt out of any utility event as long as this is not defined differently in the specifications of the utility program. The user should be aware of any increase in cost or disqualification from the utility programs specified by the utility as a result of canceling or opting out events.

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 grounding faults within the system, and disconnect power from the downstream conductors when a fault is detected.

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 use caution 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.

1.5 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 person**: Because of the inherent dangers of electricity, only a qualified person should install, maintain, service, or replace electrical wiring and connected equipment. For the purpose of this manual, a qualified person is one who is familiar with the installation, construction of operation of the equipment and the hazards involved. In addition, this person should meet the definition of a qualified person pursuant to the National Electrical Code® (NEC®)[1]. Failure to comply with the recommendation of having a qualified person install the unit when electrical work is required may void the warranty provided with this device.
- **Weatherproof seals**: VersiCharge SG units may be used indoors and outdoors.

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

[1] National Electrical Code and NEC are Registered Trademarks of the National Fire Protection Association (NFPA)

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1.6 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 the Universal Unit 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 device 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 device from service while energized.
- 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.
- This device is equipped with an auto reset feature
  - If this device is connected to a vehicle at the time that power is restored following an outage, charging may automatically resume.
  - If this device is connected to a vehicle and a ground fault trip occurs, charging may automatically resume after a delay period.
- This device should be supervised when used around children.
- Do not put fingers into the electric vehicle coupler.
- 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 coupler 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 device provided with a wire connector for field installed wiring shall be provided with instructions specifying that the connector provided shall be used in making the field connection.
- When installing this device in the hard wired configuration, power connections shall be made at line terminals with 14.5 lb-in torque.
- 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 device 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 device if the ambient temperature is greater than 50C(122F)
- Use 6-8 AWG, 75°C copper wire to connect to supply circuit.
- CAUTION: To reduce the risk of fire, connect only to a circuit provided with 40 amperes maximum branch circuit over current protection in accordance with the ANSI/NFPA 70 National Electrical Code.

1.7 Code and Standard References

- This device 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: 2594, 2231-1, 2231-2
- EV interface compliant to SAE J-1772 Level II

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- 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.
- 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

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.

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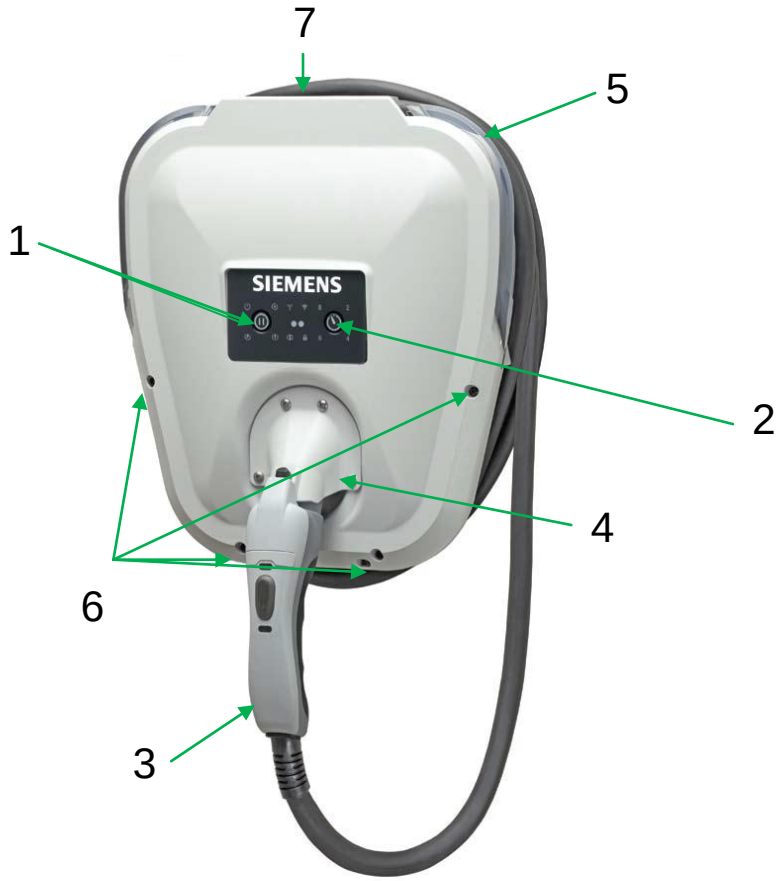
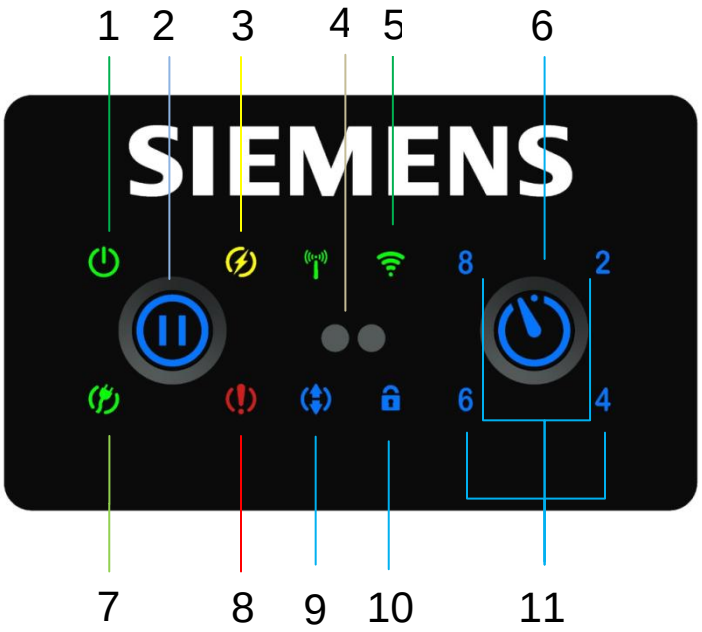
2: Device Layout

2.1 Exterior – Front



1. Pause Button
2. Delay Timer Button
3. Coupler
4. Coupler Holster
5. Halo Indicator
6. Enclosure Screws
7. Hinges

2.2 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.)

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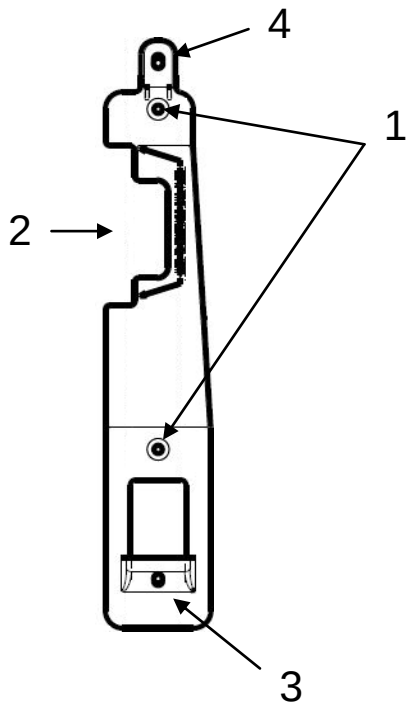
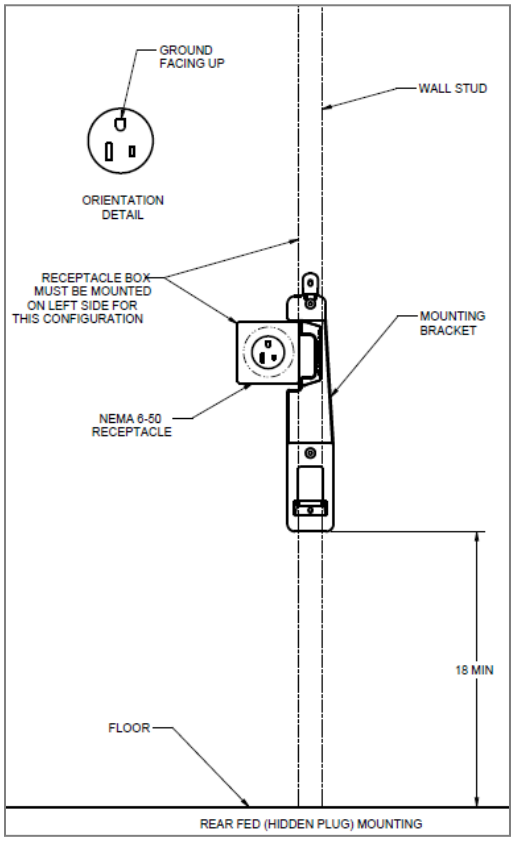
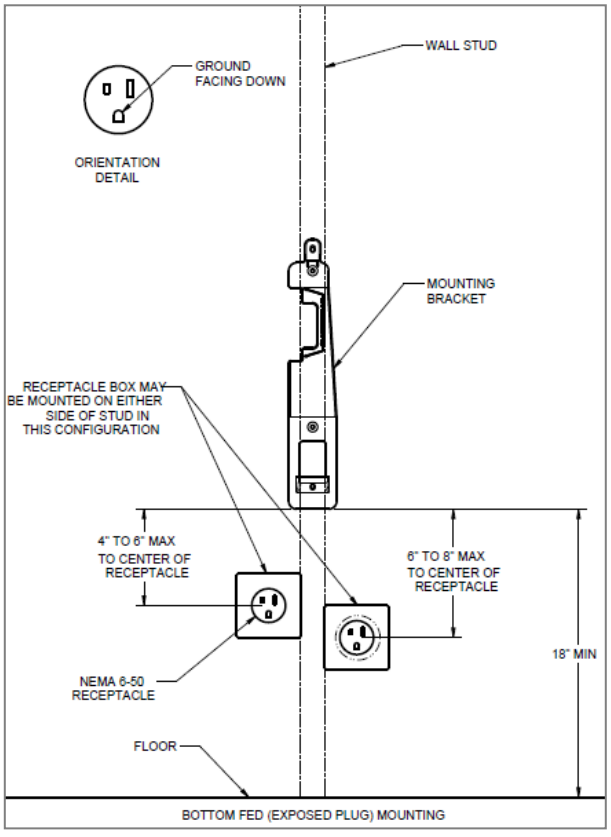
2.3 Mounting Bracket (Receptacle not Included)

1. Mounting Holes
2. Receptacle cutout
3. Mounting Slot
4. Mounting Tab







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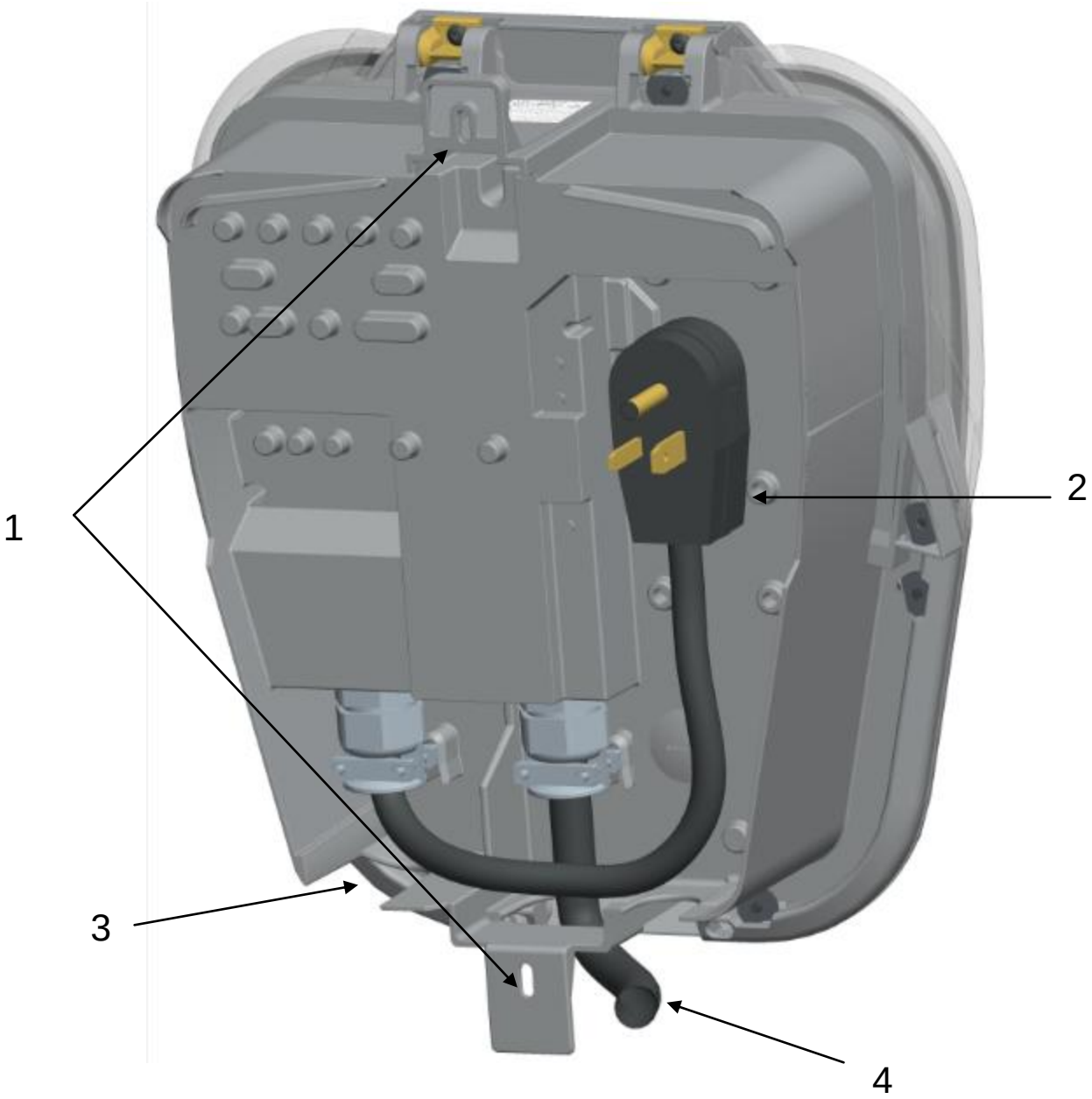
2.4 Exterior – Rear

1. Mounting Tabs
2. Plug and cord assembly in fed from behind wiring option
3. Fed from the bottom wiring option
4. Coupler and cord assembly



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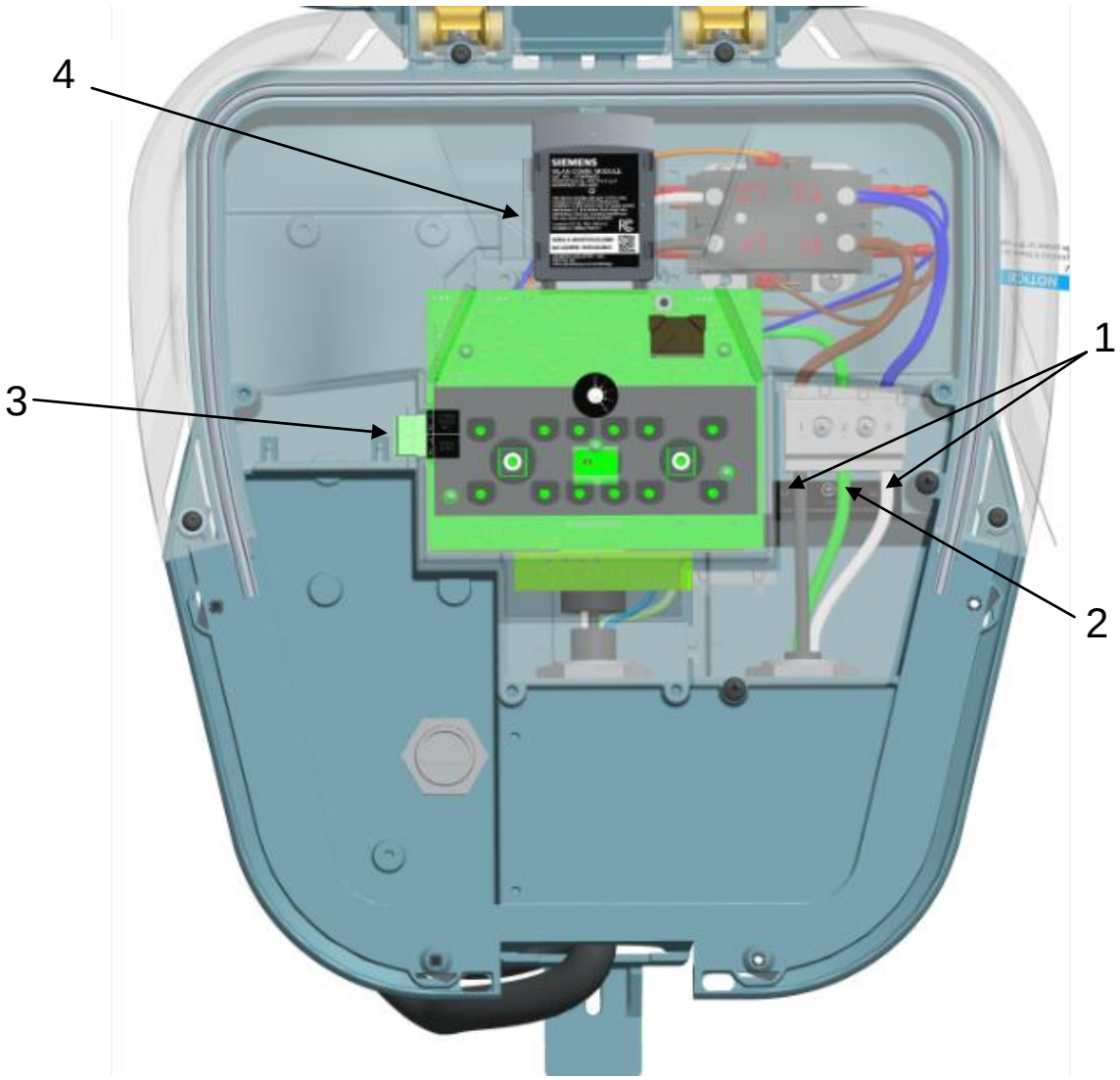
2.5 Interior – Connection Area

1. Line Conductor Connections
2. Ground Connection
3. Remote Control Interface
4. Wi-Fi Module and CEA2045 Connector



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2.6 Device States

EVSE's do not have the capability to determine whether your car has been charged or not. Refer to car manual for indication of car battery status.

State Name	Description	Indicator(s)	Halo Status Indicator
Power Available	240V or 208V Power Present	'Power Available'	Off
Ready to Charge	EV detected, waiting for charging command from EV	'Power Available' and 'Ready'	Green - Solid
Charging	Charging EV	'Power Available' and 'Charging'	Green - Fading in and out
Pause*	Operation paused	'Power Available' and 'Pause'	Off
Delay Timer	Operation awaiting delay timer	'Power Available' and 'Hour(s) Delay'	Off
Remote - Third Party	System is controlled via third party remote control interface	'Power Available' and 'Remote Control Lock' **	Dependent upon command
Remote - Local	Last command received initiated via application	'Power Available' and 'Remote Control'	Dependent upon command
Reduced Charge	Commanded to limit the maximum available rate to less than 7.2kW maximum	'Power Available' on and 'Charging' pulsing**	Green - Fading in and out

* Some EV's may initiate a delay of charge when exiting out of the 'Pause' state before the EV starts telling the VersiCharge to start charging again. Please refer to the user manual for the EV for further information.

** Press and hold the "Pause" button for 5 seconds to opt out of a remote third party (demand response) event or to return charge rate to maximum kilowatt charge. Please be aware that consistently opting out of DR events may disqualify some utility rate programs.

Further combinations of indicators on the unit are described in the Fault code section 4.3.

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Section 3: Installation

3.1 Building Survey

Available voltage, current and frequency:

- VersiCharge EV charging stations can draw up to 30A at 240 VAC, 50/60 Hz (7.2kW of power). The complete electrical structure of the building must be adequately sized to handle the entire building energy load, under peak conditions, as well as the charging station load under operation.
- Checking for adequate power includes all the connections from the utility through the entire circuit structure to the branch circuit position and connected wiring.
- Utility connection and transformer capacity - check with utility service provider to ensure enough power is available for the building and the VersiCharge under full loading.

Available breaker positions and amperage

- Verify the panel has an open position for a two pole breaker.
- Verify that the additional 30 A draw from the VersiCharge will not exceed the total loading for the Main Breaker of the structure.

Breaker selection

- A 2-pole 40 A dedicated branch circuit breaker is required for both cord-and-plug installation and hard wired installations. *Siemens Part numbers: Q240 (plug-in type), B240 (bolt-on type).*
- The VersiCharge must be wired on a dedicated circuit, with no other loads wired on that circuit.

3.2 Site Selection

NOTE: To ensure optimal functionality, we do not recommend installing the VersiCharge unit in the direct sunlight.

Accessibility

- When selecting a mounting site, ensure that the coupler can reach the EV before starting installation.
- The VersiCharge will mount on the surface of the wall, protruding at least 18 inches, and a location for installation should be chosen where there is sufficient space to park an EV, walk past the device, open nearby doors, etc., without obstruction.
- If the installation location is not already wired for installation, installation of the VersiCharge unit should be planned with an electrician and then the electrician should bring in the electricity according to those guidelines.

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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.

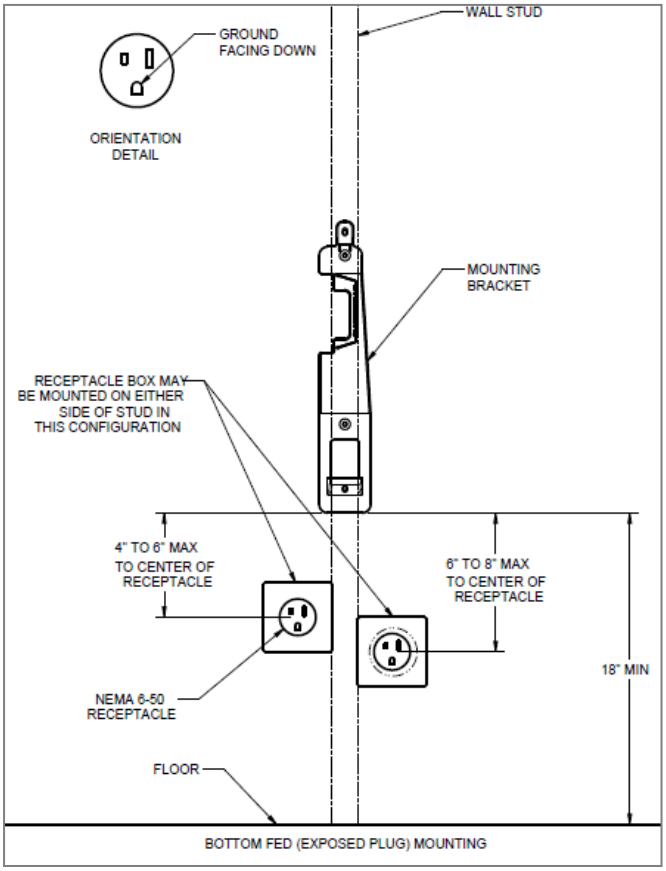
3.3 Cord-and-plug installation

The standard VersiCharge SG unit arrives factory-configured for rear fed and bottom fed cord-and-plug installations. For hardwired installations, please refer to section 3.4 of this manual. Please note that once the cord is removed, it shall not be reinstalled on the unit, otherwise the warranty will be voided.

WARNING! Due to risk of moisture, cord-and-plug installations require a NEMA outdoor rated receptacle and enclosure, when installed outdoors. Installing outdoors without properly rated outdoor receptacles and enclosures will violate listings and void the device warranty. Outdoor cord-and-plug installations must be bottom fed only.

Bottom-fed, Cord-and-Plug Installation

- Measure the plug in cord of the unit first since the mounting bracket and the receptacle need to be located within this distance of each other.
- Locate a stud within the wall to attach the mounting bracket.
  - For concrete or masonry walls, install appropriate anchors.
  - Verify that the stud or anchor and surrounding materials can handle the 20+ lbs load of the VersiCharge.
- Receptacle will be located below VersiCharge mounting bracket, either to the left or the right of the stud to which the mounting bracket will be attached. Verify receptacle location complies with local code requirements.
  - NEC® 2014 specifies: Indoor (NEC® Article 625.29B) installation 18 – 48 inches above ground level.
  - Verify local code with respect to installation height.
- Wire a standard NEMA 6-50 receptacle using appropriate wire.



- Using 7/16 inch socket head and drill, attach the mounting bracket to the wall using two lag screws provided. Verify that lag screws are going into the stud.

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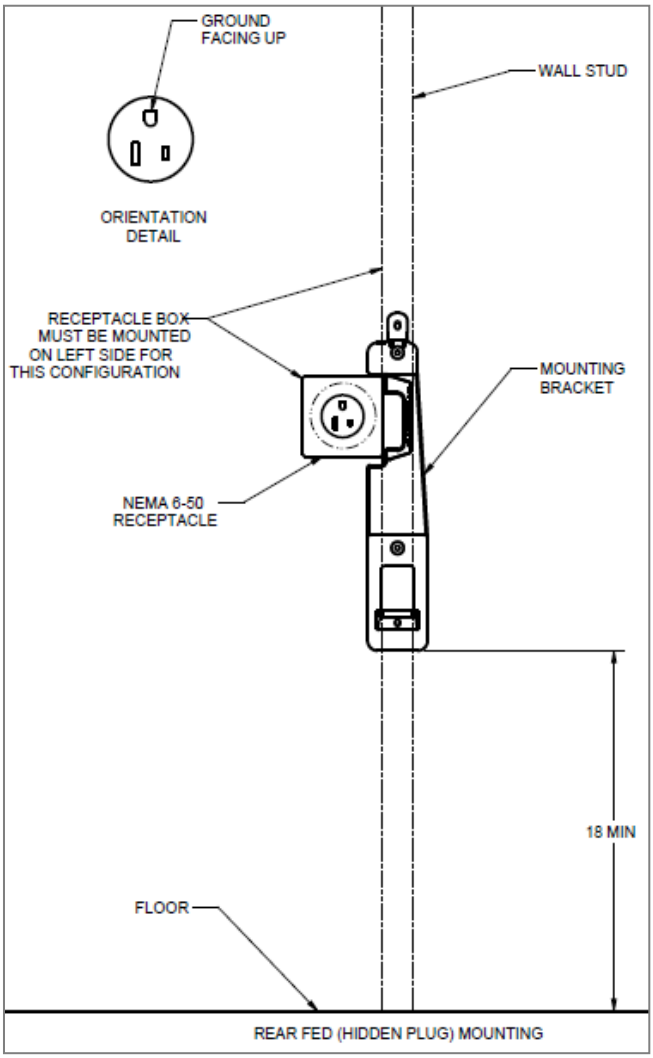
- Hang the VersiCharge on the Mounting Bracket by first hooking the bottom of the unit into the mounting slot and then hooking the top into the mounting tab.
- Secure VersiCharge to wall and mounting bracket using provided screws.
- Ensure that the breaker for the circuit on which the receptacle is wired is turned to the ‘OFF’ position, plug the VersiCharge into the receptacle and switch the breaker to the ‘ON’ position.

Rear-fed, Cord-and-Plug Installation

NOTE: Flush mount installations only, meaning the receptacle is even with wall in which it is installed.

- Locate a stud within the wall to attach the mounting bracket.
  - For concrete or masonry walls, install appropriate anchors.
  - Verify that the stud or anchor and surrounding materials can handle the 20+ lbs load of the VersiCharge.
- Ensure that receptacle can be flush mount installed to the left side of the mounting bracket.
  - Receptacle should be installed prior to mounting the VersiCharge to the wall.
  - NEC® 2014 specifies: Indoor (NEC® Article 625.29B) states installation 18 – 48 inches above ground level.
  - Verify local code with respect to installation height.
- Wire a standard NEMA 6-50 receptacle using appropriate wire.



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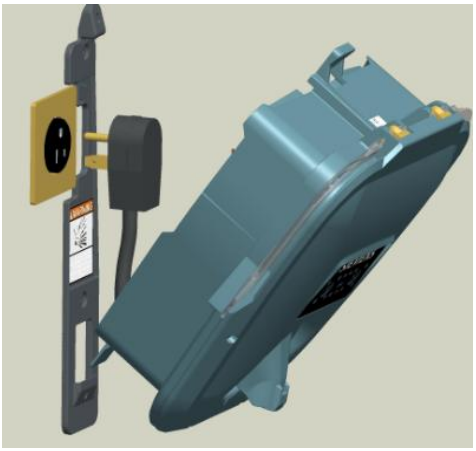
- Using 7/16 inch socket head and drill, attach the Mounting Bracket to the wall using two lag screws provided. Verify that lag screws are going into the stud.

- Before starting the step to hang the VersiCharge unit onto the mounting bracket, ensure that the circuit breaker on the circuit for the receptacle is turned to the 'OFF' position. To hang the unit onto the mounting bracket, place bottom mounting tab into corresponding slot in mounting bracket. Plug cord into receptacle. Rotate the unit towards the wall so that the hook on the unit goes over the top mounting bracket. Turn the breaker for this circuit back to the 'ON' position to power up the VersiCharge.



- Secure VersiCharge to wall and mounting bracket with provided screws

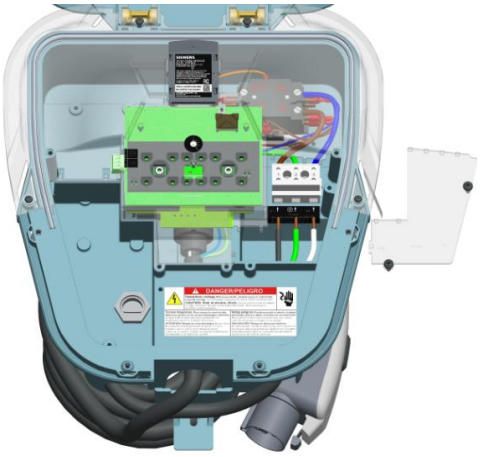
3.4 Hard-wired installation

This section describes the hard-wired installation and the removal of the cord and plug assembly in case the VersiCharge SG units need to be hard-wired during installation.

Removing the Cord-and-Plug Assembly

DANGER Hazardous voltage. Will cause death or serious injury. Turn off power before working on this equipment by turning the circuit breaker to which this circuit is wired to the 'OFF' position.

- Open hinged cover by loosening four cover Phillips closure screws.



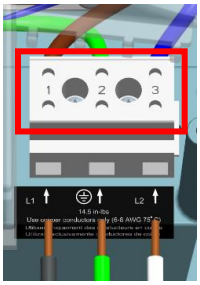
- Remove barrier by removing the two securing screws.

- Remove the cord-and-plug assembly from the conductor opening

  - Disconnect the attachment plug wires from the terminal block by loosening screws in position 1, 2, and 3.

  - Do not adjust the two screws on top of the terminal block unit. These are for factory use only.

  - Disconnect and remove strain relief and entire cord-and-plug assembly



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- Route conductors, with proper strain relief, into the VersiCharge from the conductor opening
    - Pull 3-6 inches of slack through the conductor opening
- Place bottom mounting tab into corresponding slot in mounting bracket. Secure VersiCharge to wall and mounting bracket
- Wire conductors (copper only) into device (L1, L2 and Ground) from connected conduit. Using torque screw driver, torque all lugs to 14.5 lb-in.
- Replace barrier and secure with the two screws which were removed in the beginning.
- Rotate the unit towards the wall so that the hook on the unit goes over the top mounting bracket.
- Replace hinged cover, securing with four Phillips head screws
- Turn the circuit breaker for the this circuit to the 'ON' position
- Secure VersiCharge to wall and mounting bracket

3.5 Amperage Adjustment

The Siemens VersiCharge has the option to set the maximum amperage/power that the car may draw using the Amperage adjustment dial. Note that Versicharge cannot control the power draw to the EV, it can only communicate the current capacity of the device to the EV.

NOTE: The EV controls the power draw. the VersiCharge only communicates the maximum available power to EV.

Dial Settings

- Amperage adjustment dial is for use by a qualified technician only
- Purpose of the amperage adjustment dial is to set the max current that the EV is allowed to draw from the charging station.
- The dial has 10 settings
    - 0-4 are for amperage adjustments
    - Settings 5-9 are for factory use only. These settings will result in a fault if used.
- Verify that the VersiCharge is disconnected from power when changing the amperage adjustment dial
- For a more thorough explanation of how this setting is displayed in the VersiCharge SG mobile and web application, please refer to section 4.8 of this manual

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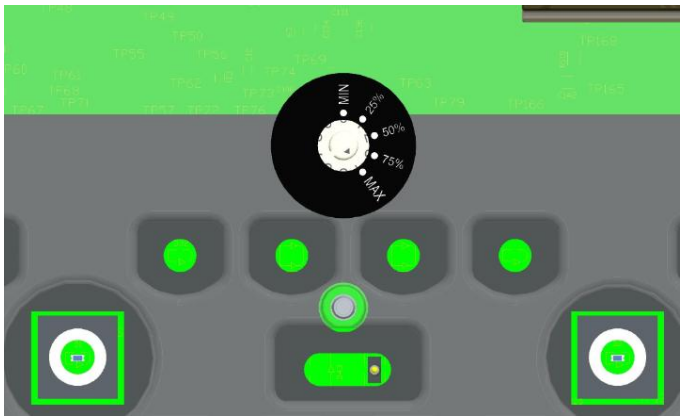


Setting	0	1	2	3	4
Label	MIN	25%	50%	75%	MAX
Current (A)	6	7.5	15	22.5	30
Power (kW)	1.44	1.8	3.6	5.4.	7.2

Circuit Requirements

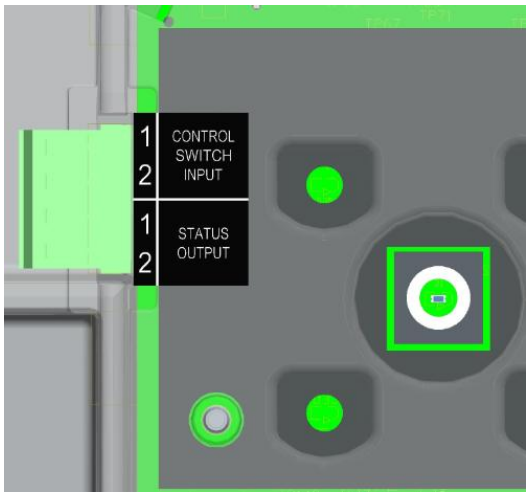
- Circuit must be sized for the max ampere requirement. Do not de-rate breakers or conductors based on amperage adjustment

3.6 Remote Control Interface

The Siemens VersiCharge has a Remote Control Interface that allows charging to be controlled by an external device. This function is for wired control, and is separate from the remote control system associated with phone and web applications.

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.**

- 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 device, the unit has to be opened by taking the following steps:
  - Set the circuit breaker for this circuit to the ‘OFF’ position



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- Open hinged cover by loosening four cover Phillips closure screws.
- Remove barrier by removing the two securing screws.
- Remove connector to run wire
- Route control wiring, with proper protection and strain relief, through the low voltage wire opening. Do not route the wiring along with any high voltage connections
- Install external control source according to the instructions provided with that device
- Turn the circuit breaker for this circuit back to the 'ON' position to power your VersiCharge back up

Note: See section 4.7 for more details on this interface

3.7 Smartphone, Tablet , and Cloud App Setup

The ability to control and monitor the VersiCharge SG is what seperates this product from previous generations of the Siemens VersiCharge as well as competitors. There are three different modes of communicating with the VersiCharge SG:

1) Smartphone Application: This is the preferred method for most SG owners. Search for "VersiChargeSG" in the App Store for the iOS operating system (for iPhone owner) or in the Google Play Store for the Android operating system. Please download this free smartphone application.

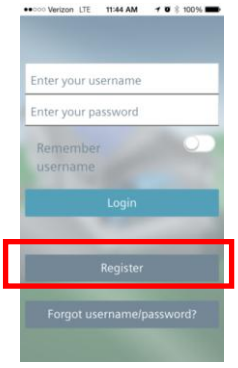
2) Cloud Application: Using your preferred browser you may control and monitor your VersiCharge SG by entering the following URL: https://versichargesg.cloudapp.net. This is suggested to be the secondary or backup mode of interfacing with the VersiCharge SG.

3) Local Web Pages: Using your web enabled device connect to the VersiCharge SG access point (identifiable with prefix "vs"- traceability number). Enter http://local.versichargesg.net in a new window of your preferred web browser. This will navigate you to the local web pages of the SG (identical functionality as web app). Most users only employ this mode of communication in the case of a Wi-Fi network failure or outage.

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

User Registration Process

- Open the Smartphone app from your phone or the cloud application from your computer/tablet/phone at https://versichargesg.cloudapp.net (ensure you have an internet connection on your device). In this manual the registration process is shown by example of the phone app. The web app user registration process follows the same steps.



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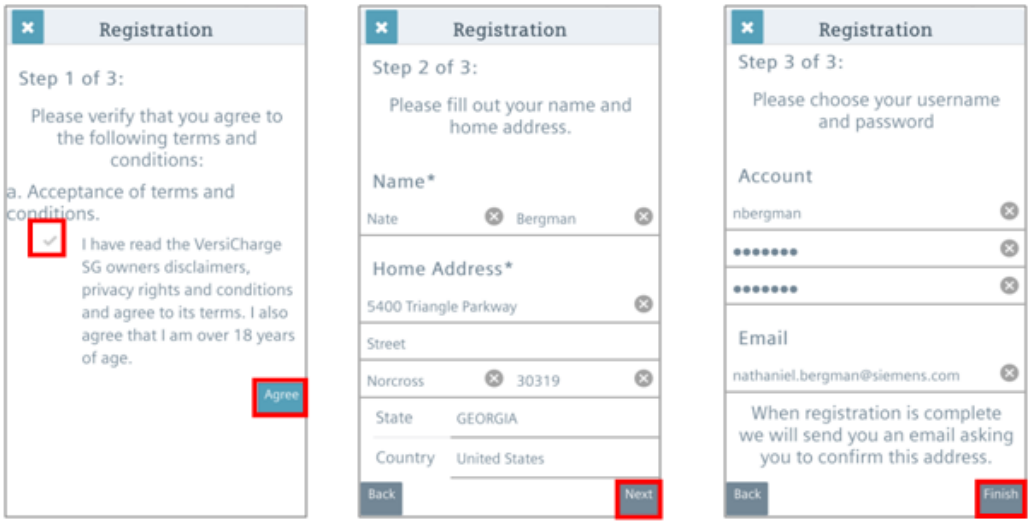
- Select “Register”
- Complete the three registration steps displayed below:



- Key considerations while completing the registration process include:
  - Step 1 of 3: You must select the grey check mark to indicate you have read the terms and conditions of use. The check mark will turn blue when selected. Full terms and conditions may also be found at: www.usa.siemens.com/VersiChargeSGApp
  - Step 2 of 3: Please enter your name and address, to be used for the purpose of suggesting utilities and rate plans based upon your location
  - Step 3 of 3: Please create an account username and password, and enter your email address for the purpose of being notified of certain charge events
- Username: Minimum 4 characters and maximum of 10, must contain at least one letter, allowed special characters !, $, _, and –
- Password: Minimum of 5 characters with suggested maximum of 12 characters, avoiding special characters <, >, “, ‘, and ~

Linking Charger to Account

- Plug in your VersiCharge SG; ensure the breaker powering the dedicated branch circuit is in the “OFF” position. Turn breaker to ‘ON’ position after plugging the unit in.

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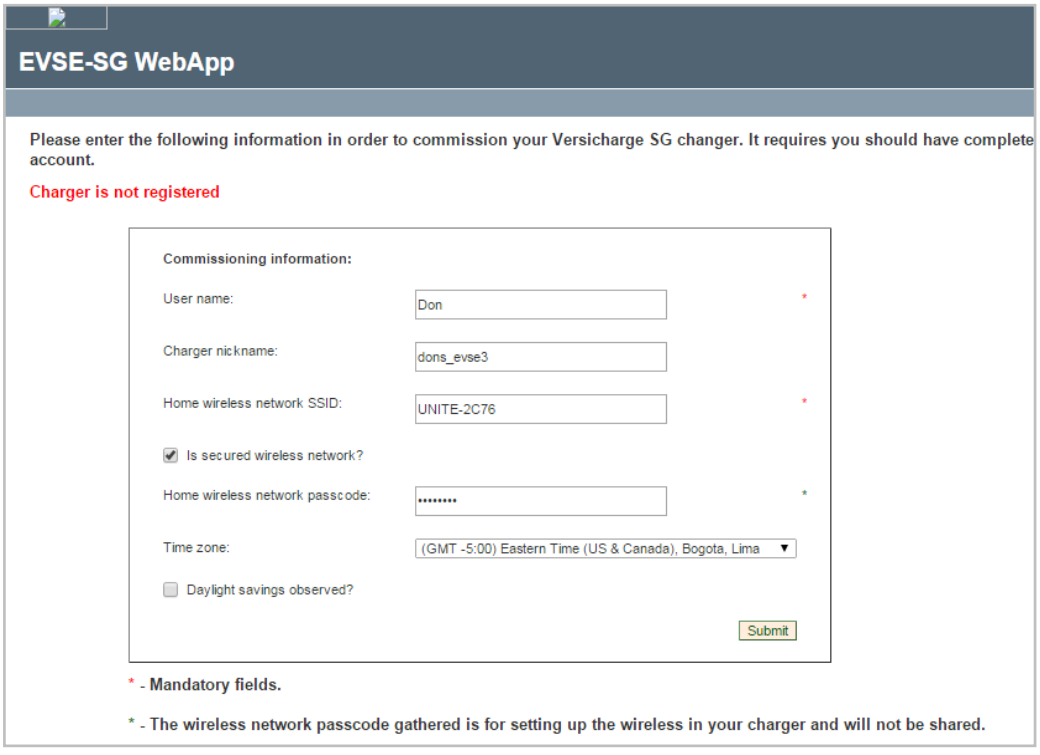
- The “power available” LED indicator will turn green and the “Wi-Fi Status” LED indicator will go through the following process:
  - Indicator should initially slowly blink red and then switch to slowly blink yellow
  - Once the indicator slowly blinks green, the charger has transitioned to access point (AP) mode and is ready to be connected to a Wi-Fi network
- Once in AP mode you may use your web enabled device (suggested laptop) to navigate to the following webpage: commission.versichargesg.net



- Please complete the following (all fields are mandatory):
  - Enter the “User name” you established during the app registration process

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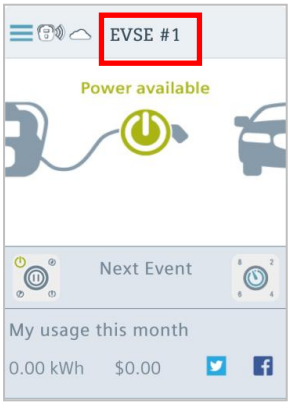
- Enter a “Charger nickname” of your choosing. Make sure to provide unique names if you have multiple chargers linked to your account (user name and password)
  - Minimum 1 characters and maximum of 10, must contain at least one letter, allowed special characters !, _, and -
- Enter the “Home wireless network SSID”. This entry is case sensitive. Make special note to select the 2.4GHz connection if a range extender is used
- If your home network is password protected, please select the check box and enter the wireless network pass code where prompted
- Select your time zone (defining internal clock of the device for scheduling purposes) and indicate if daylight savings is being observed
- Click “Submit”

- This process will link your VersiCharge SG to your chosen wireless network, which will enable communication with the Siemens cloud network
- You may confirm your charger has connected to the chosen network by observing the “Wi-Fi enabled” LED, which should transition from solid red to either yellow or green (this process may take up to 10 minutes)
  - Yellow indicates a weak connection to the chosen wireless network
  - Green indicated a strong connection to the chosen wireless network
- If the “Wi-Fi enabled” LED light remains solid red you may have a network strength issue, please test your signal strength at the location of your installation. Suggested Wi-Fi strength analyzers include:
  - For iOS suggest “Network Analyzer” in the App Store
  - For Android suggest “Wi-Fi Analyzer” in Google Play

- Verify that the VersiCharge SG is synchronized with your account
- Using your web enabled device of choice (Smartphone or computer) either open the application or go to the cloud app login page: https://versichargesg.cloudapp.net
- Using the credentials established in the “User Registration” step, login to the application
  - For Smartphones and tablets you should see the name of your charger at the top of the home screen



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- For the cloud app you will use the navigation bar to select “Settings” then “Current EV Charger” to verify the connection

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Section 4: Operation

4.1 Overview

The VersiCharge EV Charging Stations incorporate industry accepted operating standards for EV charging. These include the operation and communication protocols between the VersiCharge and the EV, as well as the required safety features. This section explains in detail the steps of operation.

4.2 Typical Operation

The VersiCharge is primarily a 'plug-and-play' device.

- Descriptions of various device states can be found in Section 2.6
- Verify that the VersiCharge is in the 'Power Available' state by ensuring that the 'Power Available' indicator LED is illuminated.
- Remove the coupler from the coupler holster by pressing the button on the coupler handle and pulling the handle away from the VersiCharge holster
- Plug the coupler into the corresponding receiver on the EV. Feel for a positive connection with a click.

WARNING! Do not force the coupler into the receiver on the EV. Forcing the connection can cause damage to the EV and/or the VersiCharge. If the connection between the receiver and the coupler shows any resistance, inspect the pins in each, and if damage is found, call a qualified service person.

- If the EV does not require a charge, the VersiCharge will go into the 'Ready to Charge' state.
- If the EV does require a charge, the VersiCharge will automatically switch to the 'Charging' state. An audible click is present when the VersiCharge goes into and out of the 'Charging' state.
- Once the charge is complete, or the EV sends a signal to stop charging, the VersiCharge will automatically return to the 'Ready to Charge" state.

4.3 Faults

A fault is indicated by a solid red halo, a blinking red halo, and/or the fault LED being illuminated. In any of these conditions, please press the 'Pause' button twice to reset the device. If the condition persists, please turn the circuit breaker feeding the device off, then turn it back on. If the condition still persists, please contact customer support at **1-800-241-4453.**

The VersiCharge will automatically disconnect power in the event of a fault.

- If a fault occurs during charging, the VersiCharge will disconnect power from the EV, with an audible click, and change to the 'Fault' state. The VersiCharge will automatically self-recover when all faults clear, with the exception of grounding faults.

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- For grounding faults, after 15 minutes, the VersiCharge will attempt to continue charging, and if no faults are present, will return to the ‘Charging’ state. During this 15 minute delay, the ‘Fault’ indicator on the unit will blink, the ‘2 Hour Delay’ indicator is illuminated, and the Halo on the unit will blink red simultaneously.
- If a fault is still present immediately after the VersiCharge re-enters the ‘Charging’ state, the VersiCharge will return to the ‘Fault’ state, and remain in that state until it is manually reset. During this time the ‘Fault’ indicator will be illuminated in red, the ‘4 Hour Delay’ indicator will be illuminated, and the Halo on the unit will be illuminated in a constant red color.
  - To reset the device, press the ‘Pause’ button, which will take the device to the ‘Pause’ state.
  - Pressing the ‘Pause’ button again will move the VersiCharge to the ‘Ready to Charge’ state, and if a charge is required, the VersiCharge will automatically begin charging and move to the ‘Charging’ state.

NOTE: To reset the device you can turn the circuit breaker feeding the device ‘OFF’, then turn it back ‘ON’.

NOTE: Some cars may delay the command to start charging again when coming out of the ‘Pause” state. Please refer to user manual of the EV if this is happening on your unit.

- If the device continues to experience immediate faults, contact a qualified person for assistance.

Delay timer LEDs in combination with fault LEDs give more information on fault type. Please call customer support for more details at 1-800-241-4453.

4.4 Cord Management

The VersiCharge has a built in cord management system.

- When not in use, the coupler cord should be looped over the top of the VersiCharge unit to prevent accidental damage
- The coupler should be plugged into the coupler holster on the front of the VersiCharge to prevent accidental damage
- While in use, the cord can be unwrapped, loop by loop, to allow sufficient length of cord to be unwound to reach the EV receiver

WARNING! Failure to properly protect the coupler and the cord could result in damaged components, which could prevent the VersiCharge from functioning properly or create a hazardous situation.

4.5 Delay Timer

The VersiCharge has a built in delay timer to allow users to select the time that they would like for their EV to charge. The delay timer will prevent the VersiCharge from entering the ‘Charging’ state for the selected length of time (2/4/6/8 hours).

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- From either the ‘Charging’ state or the ‘Ready to Charge’ state, press the ‘Delay Timer’ button
  - Pressing the button once, will delay charging to 2 hours
  - Pressing the button twice, will delay charging to 4 hours
  - Pressing the button three times, will delay charging to 6 hours
  - Pressing the button four times, will delay charging to 8 hours
  - Pressing the button a fifth time will deactivate the timer and return the VersiCharge to the ‘ready to Charge’ state, and if the EV requires a charge, to the ‘Charging’ state
- Every two hours, the next ‘hour Delay’ indicator will turn off, so you can tell how much delay time is remaining by looking at the remaining illuminated ‘Hour Delay’ indicators
  - For example: If only the ‘2 Hour Delay’ indicator is illuminated, the delay has less than 2 hours remaining
  - When the delay timer runs out, the VersiCharge unit will automatically return to ‘ready to Charge’ state, and if the EV requires a charge, to the ‘Charging’ state

4.6 Halo Operation

Halo States

Halo indicator on VersiCharge indicates the status of charging session.

State Name	Description	Halo Status Indicator
Power Available	240V or 208V Power Present	Off
Ready to Charge	EV detected, waiting for charging command from EV	Green - Solid
Charging	Charging EV	Green - Fading in and out
Pause	Operation paused	Off
Delay Timer	Operation awaiting delay timer	Off
Remote	System is controlled via remote control interface	Depends on charging or fault state

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Halo Deactivation

The Halo indicator on the VersiCharge can be deactivated to marginally lower power consumption of your device during normal operation. This will prevent the Halo from illuminating in all states, except the 'Fault' state.

- To de/re-activate the Halo:
  - Remove the coupler from the EV and place in the coupler holster
  - Verify that the VersiCharge is in the 'Power Available' state by ensuring that only the 'Power Available' indicator and, if applicable, the 'Wi-Fi Status' indicator LED's are illuminated.
  - Press and hold both the 'Pause' and the 'Delay Timer' buttons for 5 seconds. The Halo will blink green three times, and then fade out to off

4.7 Remote Control Interface

The Siemens VersiCharge has a Remote Control Interface that allows charging to be controlled by an external device. Examples include demand response switches, building automation systems, digital sensors, etc.

- To wire a digital input into the dry contact in the connection area located inside of the VersiCharge, please refer to the installation section 3.6 of this manual.
- When the external contact is closed, the alternate input will control the VersiCharge, preventing it from entering the 'Charging' state
- The status output is a switch that indicates charging status. When the contacts are closed, the unit is in charging state

4.8 App Operation

Smartphone Application

Installation and setup of the smartphone application is detailed in section 3.7. If you have not installed the app or linked your charger please review that section and complete the setup process.

Using your smartphone or tablet, please open the app. You will see the following series of screens. Log in with the user name and password established in section 3.7. You can choose to have the app remember your username, if desired.

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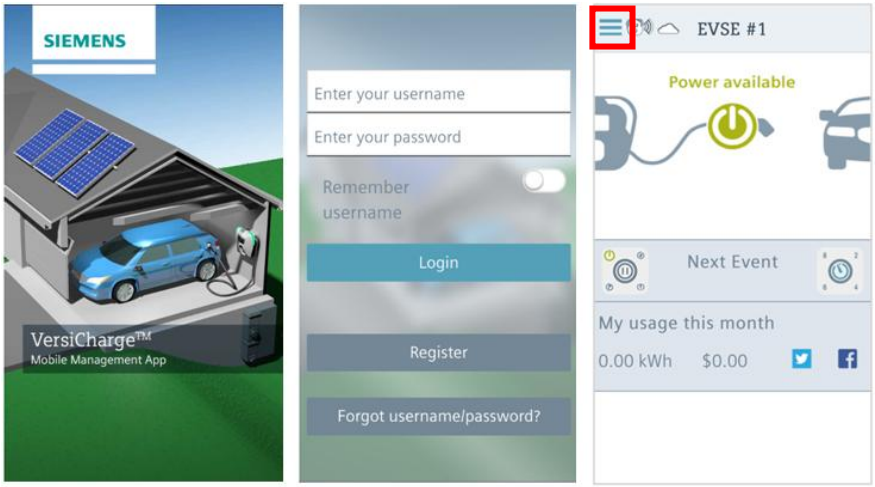

- By clicking on the navigation symbol in the landing screen highlighted in the right hand screen above, you can see the overall structure of the application

Menu Option	**Menu Option Description**
Charger Status	Displays whether the charger has power available, is delayed, is connected to an EV, has experienced a fault, or is charging
My account	Enables you to view and edit the user information you entered when setting up the app, as well as unregister
My charger	“My charger” enables you to limit the power rate at which your EV may draw power from the charger. In ‘Edit’, you will find options to edit name, location and utiltiy information for any of your chargers
Schedule	“Schedule” enables you to set weekday and weekend charge schedules at configurable power rates
Usage	“Usage” displays power consumption in kWh over periods of time, highest resolution by hour, lowest by year
Alerts	Allows you to decide which events trigger a notification email to be sent to you in case of a specific event
Savings programs	Here you have the option to identify yourself as a user who chooses to opt-in to stay informed about utility demand response events
Corporate information	Provides links to the corporate information, privacy policy, and the terms of use for the application
About	Includes information about the software code and versions. You can also find ‘Help’ under this section which will link you to the App help page with literature and contact information
Logout	Logs you out of the app

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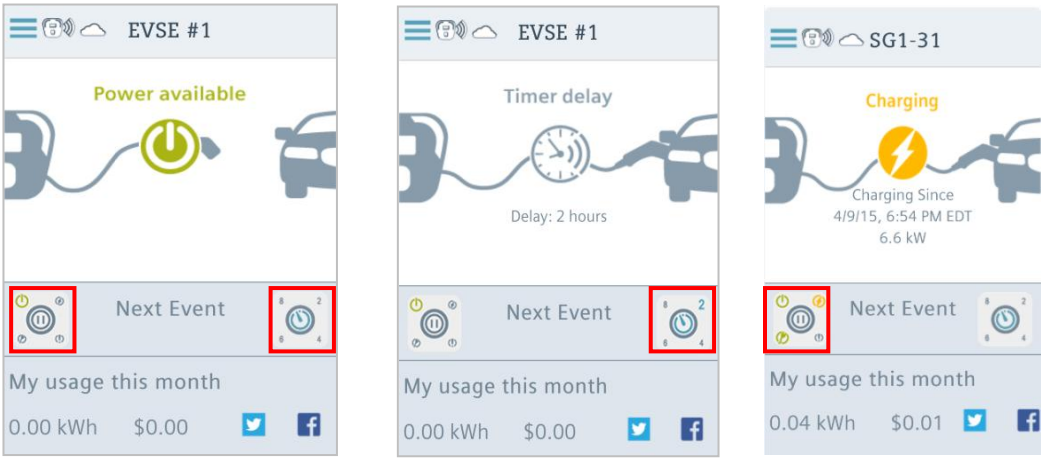
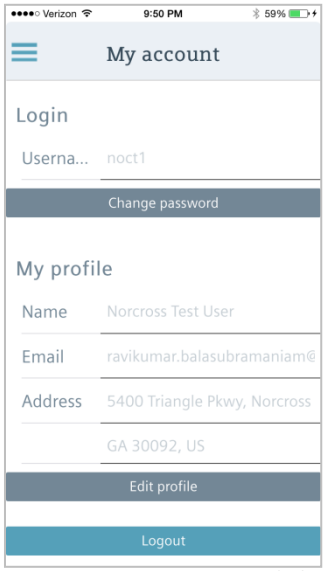
Charger status

This tab serves as the primary user interface for remote control of the VersiCharge SG, with the buttons on the left and right hand side of the screen having identical functionality as those on the face of the charger (seen below)



- The status screen displays the state in which the charger is operating. Shown above in the center is the delay state which can be remotely entered by pushing the delay button once. In this example the ‘charge’ state has been delayed by 2 hours. The graphic above on the right, shows the ‘Charge’ state. Information about the charge start time and power in kW is displayed. You have the option to pause and restart the charge from this screen by using the ‘Pause’ button on the left of the screen.
- Also displayed on this screen is the monthly usage data in kilowatt hours (kWh) which tracks power consumption and estimates the monthly cost of charging your EV based on the utiltiy rate information you provided during setup or in the information you enter in the ‘My Charger’ tab.
- Finally, link your account to either Twitter or Facebook to broadcast your EV energy consumption to your social network.

My account



- This tab allows you to edit the user data entered when registering for the app and change your password
- You may also unregister your account on this screen, this should only be done in the case of transfer of charger ownership
- Finally, use this screen to logout from the application

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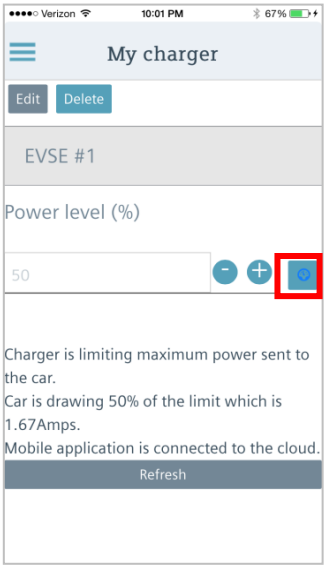
My charger

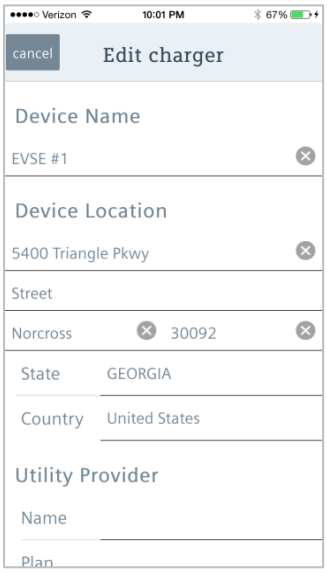
- This tab allows you to control the power level as a percentage of maximum charge rate (30A). To adjust this rate, use the + and – buttons that are provided on the tab and then hit the refresh button shown in the graphic.

- This setting will take into account any adjustment of the amperage adjustment dial you may have made outlined in section 3.5.

  - For example, if the amperage adjustment dial inside your VersiCharge unit is set to 100% (factory default), the text in the app will let you know that the VersiCharge is 'Charging the car as quickly as possible'. If you then for example use this functionality inside the app to set the power level to 50%, your charging capacity will be limited and the app will let you know that the 'Charger is limiting maximum power sent to the car'. The amount of power the car will draw depends on the charging capacity of your EV, but the app will also let you know the 'Car is drawing XX Amps of the rated 30 Amps' where the 'rated Amps' refers to the setting of your amperage adjustment dial inside your VersiCharge unit. Lastly, the app will let you know whether it is connected to the cloud in order to inform you that the command you have sent is being transmitted to the VersiCharge unit.

- Also available under the 'My Charger tab is the utility rate information. Here you can select which utility rate plan should be applied to the individual charger in order to accurately calculate the cost for power being consumed. Not only does entering the correct information help you accurately view the cost of charging your EV, but it also allows Siemens to make recommendations for reducing the total cost of ownership of your EV.





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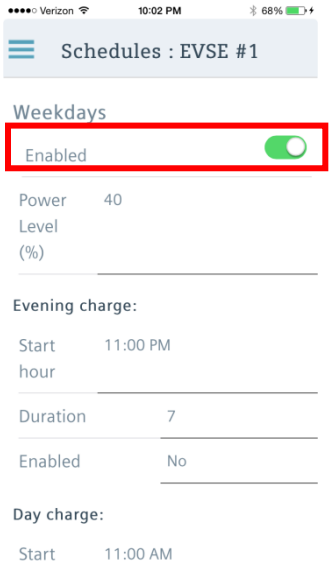
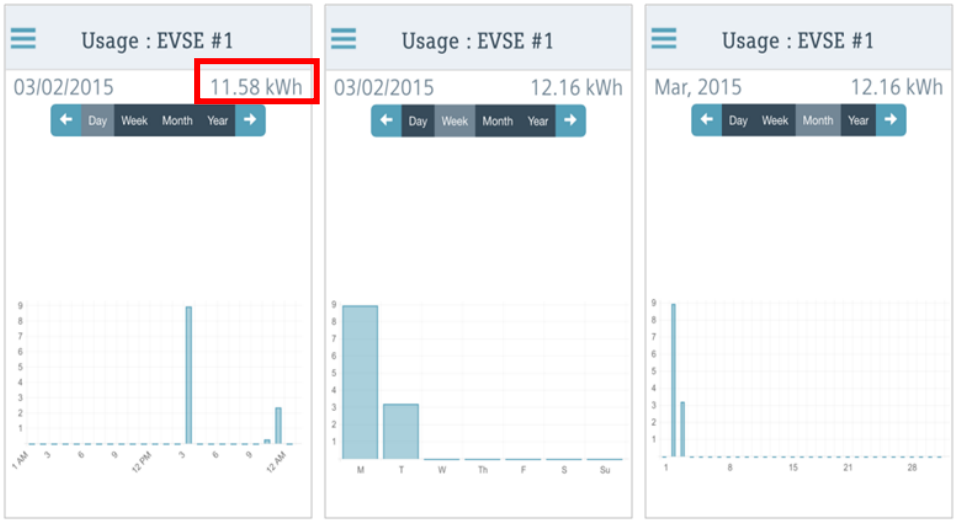
Schedule



The scheduling function allows you to automate your charging process based on your preferences.

- Use the scheduling function to select charge times for weekdays and weekends, with options for charge cycles both during the day and evening
- Power level may also be set to an adjusted rate for a scheduled charging session. This is especially useful if your utility charges peak rates, set power levels lower during peak times to minimize charging cost
- Use the slidebar to enable or disable the schedule function, note that when the schedule is enabled it overrides all other functions of the of the VersiCharge SG
- Should your VersiCharge unit experience connection problems with either the Wi-Fi network it is connected to or to the VersiCharge cloud, the schedule defined in this tab will still be executed as long as the connection to the VersiCharge and the Cloud was intact when the schedule was defined and the scheduling function was set to enabled

Usage



The usage tab is a way for you to view historical power consumption of your EV. Use this tab to observe your charge times, track your charger usage, and optimize charge

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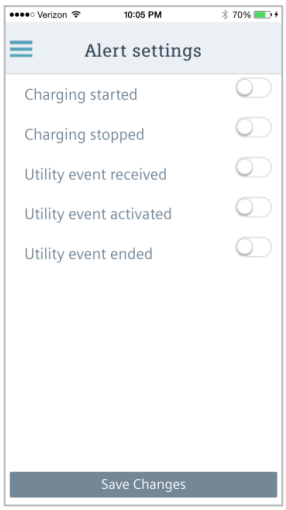
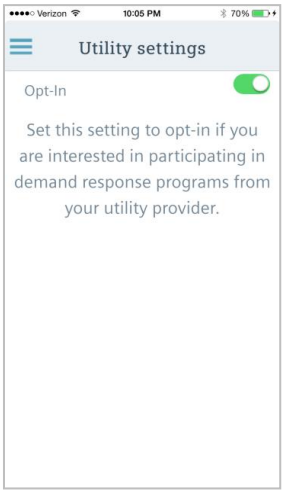
schedules based on times that work best for you. At the top right of every page, see cumulative energy consumption in kWh for the displayed period of time.

Alerts



- The alerts tab allows you to select the charger events that would prompt an email to be sent to the address you entered during registration
- Please refer to the usa.siemens.com/versicharge page frequently for updates on alerts as we receive user feedback as to what other notifications are needed to enhance your ownership experience of an EV and a VersiCharge SG
- Make sure to “Save Changes” once you have tailored the alert notification settings to your preferences

Savings Programs



Through the savings programs opt in, Siemens has the opportunity to work as a liason between you and your utility company to provide potential offers that may enhance your charging experience. Your are by default opted into this feature of the VersiCharge SG.

- Note that many utilities offer significant pricing incentives to customers who choose to opt-in to demand response or time of use rate plans
- Please contact your utility to find out if these services and incentives are offered

Corporate information

This tab provides links to the corporate information, privacy policy, and the terms of use for the application

About

This tab will bring you to the App help page with links to white papers, instructional documents, FAQ guides, legal documentation and support contact information

Logout

By selecting this option from the menu bar, you are logging out of the VersiCharge SG mobile app.

Cloud Application

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The cloud application has the same functionality as the phone app. The only differences between the two applications are structural in nature. The application landing screen is shown below and a table showing the equivalent phone or tablet page being listed for each tab located at the bottom of the web app page is provided.

Cloud App Tab	**Equivalent Phone or Tablet App Tab**
Home	Charger status
Usage	Usage
Schedule	Schedule
DR	Savings Programs
Settings	My charger, My account, Alerts

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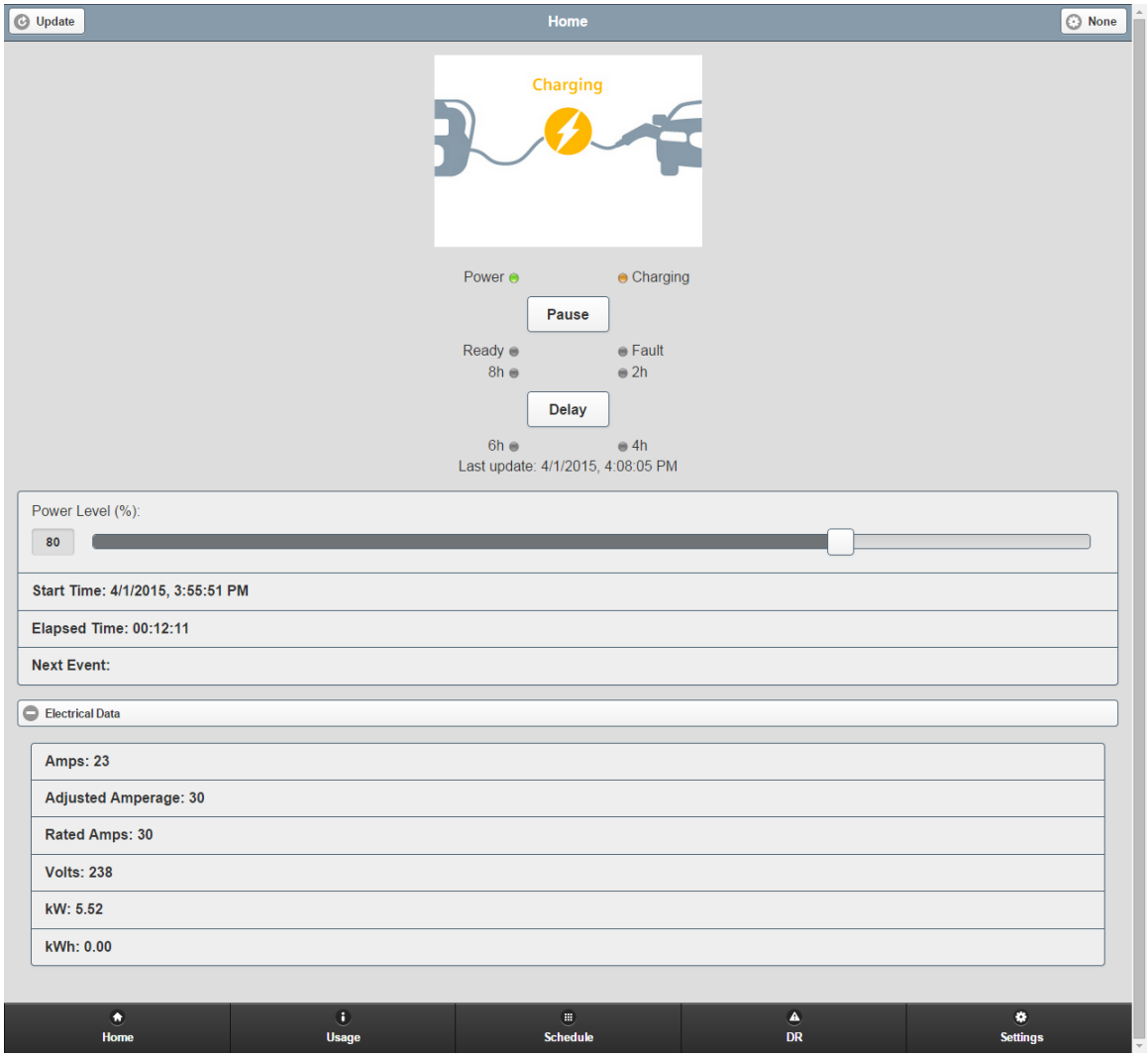

Local Web Pages

An alternative to cloud or smartphone applications for managing your VersiCharge SG is using the local web pages embedded in the charger. These web pages may be accessed by entering the individual IP address associated with a charger. This IP address may be found using a number of different apps; Fing Network Scanner is the recommended tool. Once the IP address is known, you may enter it in the search window of your browser of choice, connecting you to the local web pages for the charger. This interface will be nearly identical to the cloud app interface shown above.

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The only differences between the two interfaces is additional event logging and troubleshooting dashboards. Accessing the local web pages allows you to operate your charger off of the Siemens cloud network, by doing this you cannot opt-in to utility demand response events. Additionally, by operating off the network, you can no longer access the charger using either the cloud or phone applications.

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Section 5: Troubleshooting

5.1 General Settings

Some of the errors that occur are not caused by the VersiCharge, but by the EV compatibility or by settings which are turned on in the EV itself.

- If the unit is going into fault, please check the settings in the EV to ensure that these are not causing the VersiCharge to stop charging. Many EVs have a setting for time of charge for example in which the user defines a preference of charging only in certain hours of the day/night. Settings such as these will override all commands within the VersiCharge for safety reasons and will thus stop charging your EV. Adjusting the settings in the car would be the suggested action to take in order to be compatible with the VersiCharge.

- Nuisance fault: As a leader in electrical technology, Siemens has made the decision to install 5 mA grounding protection in all VersiCharge devices. This is the same level of protection that is required in kitchens and bathrooms of residential dwellings. Some other manufacturers (EVSE and Auto manufacturers) have selected 20 mA protection levels. Because Siemens units measure to a more sensitive level, occasional charging interruption may occur under certain circumstances. See section 4.3 for reset instructions.

5.2 Specific Errors and Actions

The VersiCharge has been designed to self indicate which type of fault has occured.

A fault is indicated by a solid red halo, a blinking red halo, and/or the fault LED being illuminated. In any of these conditions, please press the 'Pause' button twice to reset the device. If the condition persists, please turn the circuit breaker feeding the device off, then turn it back on. If the condition still persists, please contact customer support at **1-800-241-4453**.

WARNING! Before taking any of the actions which suggest opening the unit for adjustment, turn off the power supplying the VersiCharge.

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Section 6: Warranty

Limited Warranty

Siemens Industry Inc., Energy Management Division, Low Voltage Products ("**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 VersiCharge SG Cloud. The VersiCharge EVSE must be registered within 90 days of purchase to activate the warranty policy.

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. The Limited Warranty does not extend beyond the original cost of the Siemens VersiCharge EVSE.

During the Warranty Period, Siemens will, at its option, repair or replace the Defective Product free of charge, provided that Siemens through inspection establishes the existence of a defect that is 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 defect is due to a 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 LimitedWarranty continues on the repaired or replacement product for the remainder of the original Warranty Period or ninety (90) days from the date of Siemens's return shipment of the repaired or replacement product, whichever is later.

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The Limited Warranty covers both parts and labor necessary to repair 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 repaired or replacement product from Siemens, via a non-expedited freight carrier selected by Siemens, to locations within the United States (including Alaska and Hawaii) and Canada, but not to 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. Any such damage is the responsibility of the freight carrier.

To obtain repair or replacement service under this Limited Warranty, the customer must comply with the following policy and procedure:

- All Defective Product must be returned with a Return Merchandise Authorization Number (RMA) which customer must request from Siemens.
- RMA 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.

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province to province.

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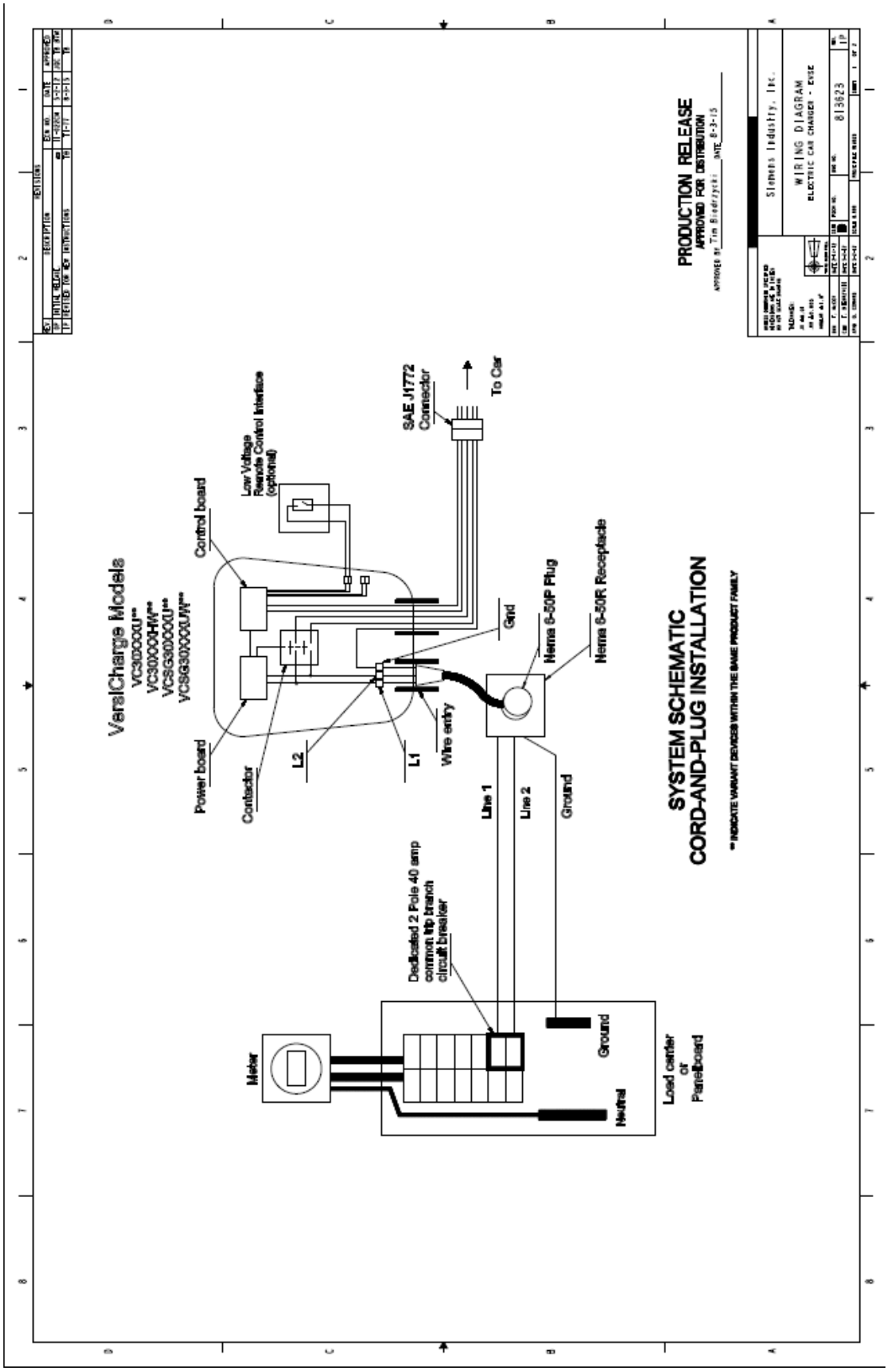
Section 7: Wiring Diagrams



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