SIEMENS

VersiCharge™ SG
Electric vehicle charging station

usa.siemens.com/versicharge

This product version has been discontinued and is no longer available.

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.
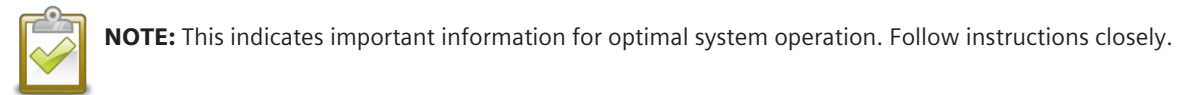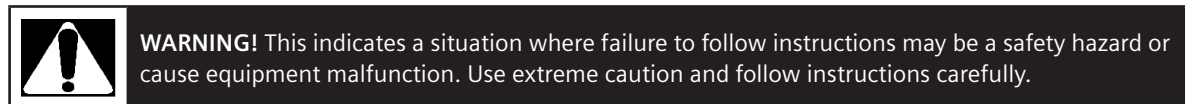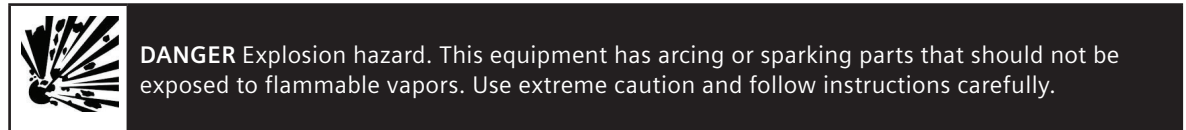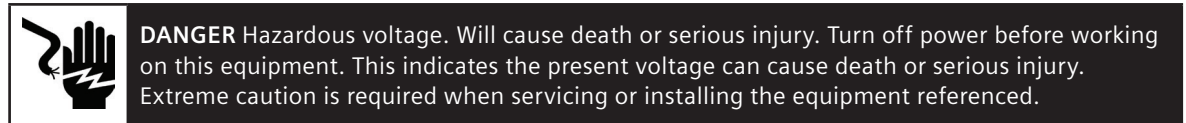
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SECTION 1

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 (EV) charging station.

1.2 Symbol Legend

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

DANGER Hazardous voltage. Will cause death or serious injury. Turn off power before working on this equipment. This indicates the present voltage can cause death or serious injury. 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 connection point for ground conductor.

1.3 Product Labels

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

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

Danger label indicates risk of hazardous voltage and electric shock which will cause death, serious injury, or substantial damage. Turn off the power 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.
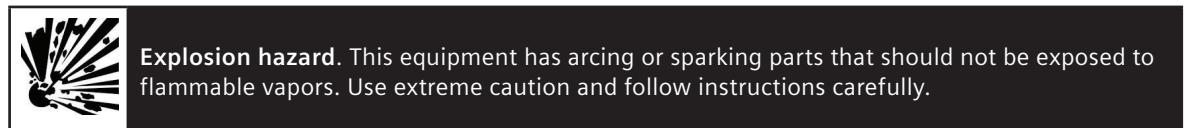
Indicates connection point for ground conductor.

1.4 Definitions

AC refers to alternating current.

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. Vapors can ignite, creating an explosion. Store flammable vapors away from all electrical equipment, and should vapors be present, allow enough time for ventilation before operating this equipment.

CCID refers to charging circuit interrupting device. The Siemens VersiCharge line of EV Charging Systems includes a 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.

EV refers to an electric vehicle.

EVSE refers to electrical vehicle supply equipment.

SG refers to Smart Grid, a term used to describe 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, if 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.

VersiCharge SG refers to any Wi-Fi enabled VersiCharge Smart Grid unit with a plug and cable assembly attached, i.e. part numbers VCSG30GXXXX (indoor / outdoor use).

1.5 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. Local permits may be necessary to install EV charging equipment. Contact your local electrical inspector's office, and your local utility, prior to beginning work to understand what local requirements/ permits are necessary.

- Qualified person. Because of inherent dangers of electricity, only a qualified person should install, maintain, or service the VersiCharge equipment. For the purpose of this manual, a qualified person is one who is familiar with the installation, construction, operation, and the hazards of working on the equipment. In addition, this person should meet the definition of a qualified person pursuant to the National Electrical Code® (NEC®). Failure to have a qualified person install/maintain/service the unit may void the warranty.

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

- Weatherproof seals. VersiCharge SG units may be used indoors and outdoors.

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. Note: This manual contains important instructions for the Universal Unit that shall be followed during installation, operation, and maintenance of the unit.

- Read these 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 power is supplied to the equipment.

- 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 cable 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 installation shall be provided with instructions specifying 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 in/lb 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 50° C (122° F).

- Use 6-8 AWG, 75° C (167° F) copper wire to connect to supply circuit.

- CAUTION: To reduce the fire risk, 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.

- 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 is recommended when installing or servicing any electrical equipment. Personal protection equipment may include eye protection, shock protection, gloves and other any appropriate protection.

 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.

SECTION 2

Device Layout
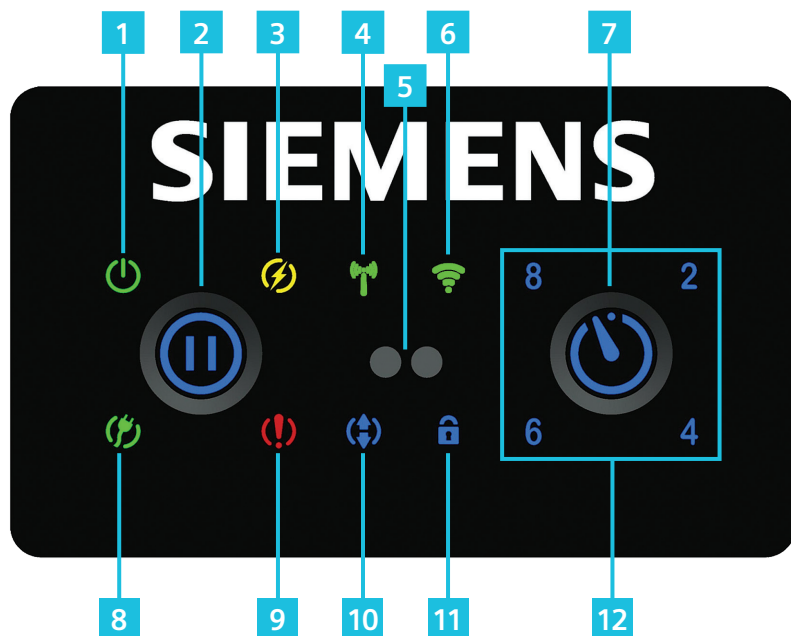
2.1   User Interface (UI)

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

2.2   UI LED lights and their meaning

- **Power –** When lit, power is going the unit. When not lit, there is no power to the unit; (1) check that the plug is in the socket properly; (2) check that the breaker power feed is in the ON position. If in the ON position and there is no power to the unit, check for local power failure.

- **Pause –** Note: this is locked for Open Charge Point Protocol (OCPP) implementation. During commissioning the LED will illuminate, this confirms connection to OCPP server.

- **Charging –** lit, unit is charging; blinking, the unit is delivering less than 100% of rate not lit/off, unit is not charging/getting power.

- **Infrared Service Portal –** for service only.

- **Zigbee –** green, strong signal; yellow, weak signal; red, not turned on. Note: Normal Zigbee behavior is that it comes on at power up for only a few seconds, if the Zigbee stays on longer than a minute, power cycle the charger, if the Zigbee remains on and steady, call Customer Service for help.

- **Wi-Fi/Wireless Router Status –** displays connection signal strength to the Wi-Fi router; green, strong signal; yellow, weak signal; red, no signal. If the Wi-Fi Status light remains solid red you may have a

network strength issue, test your signal strength at the location of your installation. Suggested Wi-Fi strength analyzers include:

- **For iOS Network Analyzer –** find in the App Store

- **For Android Wi-Fi Analyzer –** find in Google Play

- **Time Delay –** press once for 2 hour delay, twice for 4 hour delay, three time for 6 hour delay, four times for 8 hour delay, an additional button press will clear the delay.

- **Ready –** when lit, car is connected and recognized.

- **Fault –** When lit, this indicates a ground fault in the unit. If the fault is recoverable, the halo fades in and out in red, and the Pause button will be unlocked so it can be pushed twice to reset the fault and get to a state in which a charge can be authorized using the driver app. See 3 and 3.1, below, for more on faults.

- **Remote Control –** This light is lit when the last command for the station was not received from the buttons on the faceplate.

- **Remote Lock –** When lit, this indicates the front panel buttons are locked, i.e., the buttons cannot be pushed to execute commands.

- **Time Delay Duration –** 2, 4, 6, or 8 hours.

SECTION 3

Faults – General

The VersiCharge charger has been designed to self-indicate which type of fault has occurred.

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, press the Pause button twice to reset the device. If the condition persists, turn the circuit breaker feeding the device OFF, then turn it back ON. If the condition still persists, contact customer support at 1-800-333-7421.

VersiCharge will, if charging, automatically disconnect power to the car in the event of a fault.

> **⚠ WARNING!** Turn off the power VersiCharge power supply before taking any action which suggests opening the unit for adjustment.

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

- Grounding faults. When a grounding fault occurs, after 15 minutes 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 and a red Halo light will blink, the 2 Hour Delay indicator is lit.

- Persistent fault. 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 and Halo will be red, and the 4 Hour Delay indicator will be lit.

- To reset the device, press the Pause button once, to go into 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 move to the Charging state automatically and begin charging.

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

NOTE: When coming out of the Pause state, some cars may delay the command to start charging again. If this is happens refer to user manual of the EV.

- Contact a qualified person for assistance, if the device continues to experience faults.

- 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.

3.1 Faults related to settings

Errors can be caused by the EV, its compatibility with the VersiCharge, or by settings which are turned on in the EV itself.

Fault – EV not charging at the time set in the Smart App. Check the settings in the EV to ensure that these are not causing the VersiCharge to stop charging and go into a Fault state. EV settings can override the VersiCharge settings; i.e., many EVs have a setting for time of charge 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 stop charging your EV. Adjust the EV settings in order to be compatible with the VersiCharge.

Fault– Nuisance. 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 residential kitchens and bathrooms. Some manufacturers (EVSE and Auto manufacturers) have selected 20 mA protection levels. Because Siemens units are more sensitive, occasional charging interruption may occur.

SECTION 4
What You Will Need To Troubleshoot

- Check that the VersiCharge is plugged in, has power, and the power light is lit.

- The URL to access the local web pages is:

  1. Charger in Access Point (AP) (Wi-Fi Status light is green) mode:
     http://commission.versichargesg.net

  2. Charger in client mode (Wi-Fi Status light is blinking green/red, yellow/red, amber/red) and is connected to the wireless network:
     http://<IP_address_of_the_charger>

- IP address of the device. After commissioning and connected to local network use an app like Fing downloaded to a smartphone, or a laptop running Windows 7, 8, and 10 connected to the network to get a list of all connected devices (see References, IP Address Identification, at the end of this document.)

  o If the VersiCharge has already been commissioned, log into the Cloud and the IP address will be in the Home page at the bottom, Charger information.

- Mac Address of the device. Find the MAC address:

  - Remove the Wi-Fi Module, the MAC address is on the label in the front of the Wi-Fi Module.

- Local page URL

  o Pre-commissioning URL—VersiCharge in AP Mode:
    http://commision.versichargesg.net;

    - AP Mode – Wi-Fi Status light is blinking slowly green

    - VS-serial number.com - VersiCharge router communicating.

- Post-commissioning URL – VersiCharge in Client Mode:
  http://insert charger IP address here (IP address with http:// in front).

  o Client Mode – Wi-Fi Status light is blinking red/green, red/yellow, red/orange

  o VS-<last 10 characters of serial number>.com – If the customer doesn't see this or, if the customer sees VS-no charger.com, power cycle the charger.

- Place the pre-commissioning or post-commissioning IP address, as appropriate, in the browser address bar and the browser will navigate to the charger's embedded web pages.

- Ping the VersiCharge to confirm communication with the router. See also section 10.1.

  o Go into the cmd prompt in a laptop/computer and type: ping space IP address.

  o If the test times out, the VersiCharge is not communicating with the router.

 o If the ping returns data successfully, it is communicating.

- VersiCharge Cloud URL (https://versichargesg.cloudapp.net)

- Ability to test signal strength (Wi-Fi Analyzer for Windows or Network Analyzer for Apple)

- Is there a network Extender? For more on the Extender, see Section 5.3.

   o Is the Extender using the same credentials as those set up in the cloud? If not, go into the settings of the Extender and synchronize the credentials.

   o Is the router using a network band of 2.4 GHz?

- Confirm network band of 2.4 GHz: If you are running Windows 10 or later, while connected to the Wi-Fi network registered to the cloud: Find the network in the lower right-hand corner of the PC/laptop. Go to Properties and scroll down until you see the SSID information (see below). Locate the SSID for your network.
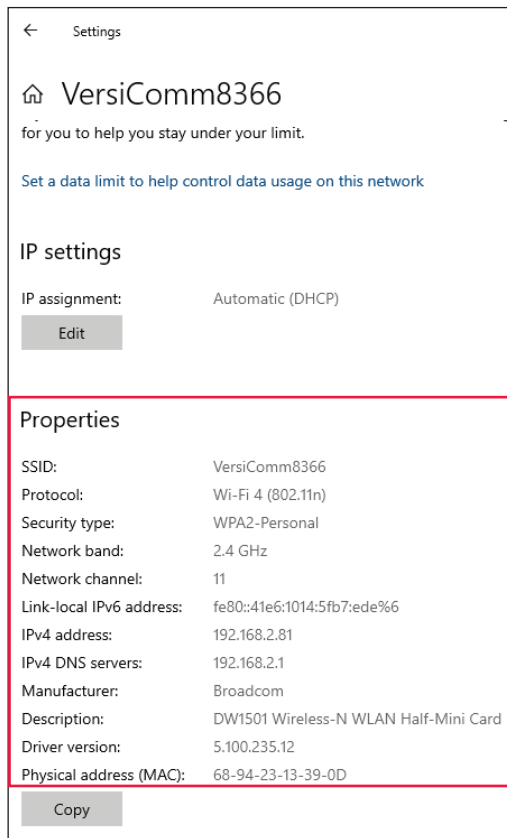
SECTION 5

Troubleshooting Pre-Commissioning

5.1 Wi-Fi/wireless router status troubleshooting summary

Fault Description	State	Cloud	Remedy
• No Wi-Fi module/dead module	• Wi-Fi not installed	No connection	• Install Wi-Fi module.
• Module fails self-diagnostics	• Wi-Fi Module Malfunction	No connection	• Open cover. • Slide Wi-Fi module out of the channel and and reseat it firmly by sliding back into position.
• Wi-Fi installed and working • Module power LED on • System trying to communicate with the service portal	• Wi-Fi Installed	No connection	• Power cycle VersiCharge Wi-Fi module – carefully slide out of the channel and slide back in, seating firmly; • Call Customer Service
• Wi-Fi established communications with service portal	• Wi-Fi OK	No connection	• Power cycle the VersiCharge and check Wi-Fi status for AP Mode. • Call Customer Service if not in AP mode.
• Wi-Fi can accept connection from local wireless device	• Wi-Fi in Access Point Mode	No connection	• The charger should be broadcasting its SSID, otherwise, power cycle the charger and wait for the SSID broadcast. If the issue persists, then call Customer Service.
• Wi-Fi module is attempting to connect to the local wireless network	• Wi-Fi connecting to local WLAN	No connection	• NOTE: This process can take several minutes; system is checking credentials, (how fast this proceeds depends on signal strength).
• Wi-Fi module has established connection to the local wireless network • Has a good/fair/weak signal • No Internet access is available	• Wi-Fi connected to local WLAN • Good/Fair/Weak Signal • No internet	No connection	• Home owner's Internet is down. • The signal from the EVSE to the router is good. • No connection to the cloud. • Can log on to the EVSE from homeowner's local network through local webpages.
• Wi-Fi module has established connection to the local wireless network • Has a good signal • Has Internet access	• Wi-Fi connected to local WLAN • Good Signal • Internet connection	Connected	• NOTE: Ideal state – no further action required.
• Wi-Fi module has established connection to the local wireless network • Has a fair signal • Has Internet access	• Wi-Fi connected to local WLAN • Fair Signal • Internet connection	Connected	• NOTE: Fair state – no further action required.
• Wi-Fi module has established connection to the local wireless network. • Has a weak signal • Has Internet access	• Wi-Fi connected to local WLAN • Weak Signal • Internet connection	Connected	• NOTE: Weak state – consider adding a signal extender that supports 2.4 GHz to improve signal strength.

5.2   Charger not commissioned due to incorrect credentials

Charge not commissioned – incorrect credentials

1		Request the customer log into the cloud account.
2		Verify the account is registered.
3		Verify the cloud account login/password information is accurate (be aware that it is case sensitive).
4	IF	Customer cannot log into the cloud account.
5	THEN	Resolve the cloud account issue. (This is usually a password issue; use the Forgot Password link to update the password and login.)
6	IF	Cloud account information is correct
7	THEN	Check router plug and LED light. Plug should be firmly in the socket and the LED light should be lit.
8		Check the modem plug and LED light. Plug should be firmly in the socket and the LED light should be lit.
9		Check the IP address using the app, Fing or another IP address application.
10		Test router by connecting to the Internet and doing a search on a web page (i.e. Google.com).
11		Power cycle the VersiCharge (turn breaker OFF and ON), allow time for the system to reboot.
		Connect to the web using VS-<last 10 characters of the Serial Number>.com. Note: This communication port will NOT be available after commissioning.

12		Enter the pre-commission URL (https://commission.versichargesg.net) while charger is in AP mode and smart device is connected to the charger's access point.
13		On the Charger Commission page, enter the requested information.
14		Review the information in all pages ensuring everything matches the VersiCharge cloud registration. Updates can be made in their respective pages.
15		Update charger name/SSID passcode information or wireless network information in the Charger Network page.
16		Select the *Submit* button once all information has been confirmed; the VersiCharge should communicate with the cloud and be successfully commissioned.

Charge not commissioned - incorrect credentials

16 Select the Submit button once all information has been confirmed; the VersiCharge should communicate with the cloud and be successfully   commissioned.

Charge not commissioned - incorrect credentials

17   Find the MAC address and serial number (Traceability Number) at the bottom of the Commission page. This information will only be available in the cloud account after the VersiCharge has been commissioned and has successfully communicated with the cloud.

Charge not commissioned - incorrect credentials

18	IF	VersiCharge doesn't complete commissioning
19	THEN	Call Customer Service

5.3 Router unable to communicate with VersiCharge

There are two areas to troubleshoot: 1. the homeowner's network and; 2. the VersiCharge Wi-Fi Module.

Router unable to communicate with VersiCharge		
Troubleshooting the homeowner's network		
1		Check the signal strength at the VersiCharge using one of the suggested applications, Wi-Fi Analyzer or Network Analyzer (see 11.3 Testing Signal Strength).
2		Power cycle the VersiCharge (turn the circuit breaker OFF and ON), allow time for the system to reboot.
3		Test router and modem by connecting to the Internet and doing a search on a web page (i.e. Google.com).
4	IF	If the homeowner cannot do an Internet search, the Internet is down.
5	THEN	Resolve this before moving forward. (Homeowner contacts Internet Service Provider (ISP) regarding service interruption.)
6	IF	The router is working, but there is a weak or no signal to the VersiCharge,
7	THEN	Move the computer/router closer to the VersiCharge.
8		Test the signal using Wi-Fi Analyzer or another app at the VersiCharge again. If
9	IF	the Wi-Fi Status is still weak or there is no communication,
10	THEN	The homeowner may need to add an Extender that supports 2.4 GHz to the network.
11	IF	If the Wi-Fi Status is strong
12	THEN	Troubleshoot the Wi-Fi Module.
Troubleshooting the Wi-Fi module		
1		Turn breaker power to the VersiCharge to OFF.
2		Open the front cover of the VersiCharge
3		Slide the Wi-Fi module out of its channel and slide and back in until firmly seated in the channel.
4		Turn the breaker power to the VersiCharge to ON.
5		Allow time for the VersiCharge to reboot (this may take several minutes).
6	IF	The Wi-Fi Status is red, or the Wi-Fi Status light is not lit
7	THEN	Call Customer Service
8	IF	Wi-Fi status is yellow or green and steadily on, the VersiCharge is communicating.
9	THEN	Using the VS-<last 10 characters of serial number>.com communications, enter the IP address of the charger that you located in section 9 (IP Address Identification) into a browser while connected to the network
10		Navigate to the local web commissioning pages using the commissioning URL http://commission.versichargesg.net .
11		Provide the charger with the correct information set up during account registration to start the second connection attempt to the VersiCharge SG Cloud via the following steps:
12		Enter the information in the Commission web page.
13		Navigate to the System Info section of the Commission page to find the basic information on the charger.

14	Check that all credentials for the network have been entered and are correct.
15	Click the Submit button.

16		Navigate to the cloud account and check the charger name and IP address; they should appear now.
17	IF	If the charger name/IP address are not in the cloud,
18	THEN	Wait several minutes and go back in; this information should appear. This indicates the charger has been successfully linked and is communicating with the cloud. Upon charging the first time, the information will be reflected in the cloud application.
19		NOTE: This local web app login is case sensitive for username and password and is only available *after* commissioning. This navigates to the local home pages embedded in the VersiCharge. While this looks similar to the VersiCharge Cloud application, it does not have the same functionality.

SECTION 6

Troubleshooting: Post-Commissioning

6.1 Charger unable to communicate to cloud server/service

Three conditions may cause this issue: 1. The homeowner's Internet may be down. 2. The network signal strength is not strong enough for VersiCharge communication. 3. The cloud server/service is down.

NOTE: if there has been a password change, allow 24 hours for the password to be synchronized to the VersiCharge.

VersiCharge not communicating with the cloud

Troubleshooting the homeowner's network		
1		Check the signal strength at the VersiCharge using one of the suggested applications, Wi-Fi Analyzer or Network Analyzer.
2		Power cycle the VersiCharge (turn the circuit breaker OFF and ON), allow time for the system to reboot.
3		Test router and modem by connecting to the Internet and doing a search on a web page (i.e. Google.com).
4	IF	The homeowner cannot do an Internet search, the Internet is down.
5	THEN	Resolve this before moving forward. (Homeowner contacts Internet Service Provider (ISP) regarding service interruption.)
6	IF	The router is working, but there is a weak or no signal to the VersiCharge,
7	THEN	Move the router closer to the VersiCharge.
8		Test the signal using Wi-Fi Analyzer or another app at the VersiCharge again.
9	IF	the Wi-Fi Status is still weak or there is no communication,
10	THEN	The homeowner may need to add an Extender that supports 2.4 GHz to the network.
11	IF	The Wi-Fi Status is strong, but VersiCharge is not communicating with the cloud.
12	THEN	Troubleshoot the Wi-Fi Module.
Troubleshooting network strength		
1		Test the signal using Wi-Fi Analyzer or another app at the VersiCharge.
2	IF	The Wi-Fi Status module is not communicating (red),
3	THEN	The homeowner may need to add an Extender to the network that supports 2.4 GHz.
4	IF	The Wi-Fi Status is strong (green).
5	THEN	Power cycle the VersiCharge (turn circuit breaker to OFF and then ON), allow time for the system to reboot.
6		Verify whether the charger establishes communication with the Cloud service by navigating to the cloud.
7		Enter the Cloud account user credentials to access the local web page. Note: cloud account information is case sensitive.
8	IF	The cloud account sees the VersiCharge, the connection was successful.
9	IF	The cloud doesn't see the VersiCharge.
10	THEN	Call customer service for further instructions.
Troubleshooting a cloud outage		
1		Contact customer service and notify of the outage.
2		Try again later.

6.2 Due to wireless network credentials being modified

See 5.2, Charger Not Commissioned Due To Incorrect Credentials, with the VersiCharge in AP mode, access the local web pages using http://commission.versichargesg.net

6.3 Due to addition of wireless network extender

VersiCharge not communicating due to addition of wireless network extender

1		Navigate to the cloud account and confirm the IP address and MAC address.
2		Using Fing or a similar application, confirm the IP address of the VersiCharge.
3	IF	The charger IP address matches the cloud IP address listed for the charger.
4	THEN	Using an app like Wi-Fi Analyzer check the signal strength at the VersiCharge.
5	IF	The signal strength is good.
6	THEN	Power cycle the VersiCharge by turning the circuit breaker OFF and then ON
7		Check Wi-Fi Status
8		Slide the Wi-Fi Module out of the channel and slide the module back into the channel firmly
9	IF	The VersiCharge is now communicating
10	THEN	Select the network with the extender.
11		Go into the embedded web pages.
12	IF	The signal strength is weak
13	THEN	Check that the extender is connected to the Wi-Fi network.
14		Check that the extender Wi-Fi network is at least 2.4 GHz (see 3 What You Will Need to Troubleshoot, above), and that the Access Point/Extender switch is set to Extender.
15		Check that the network name (SSID) and router's password are set for the extender. The extender can then use the same password and SSID as the router.
16		Check that the extender is approximately halfway between the router and the VersiCharge.
17		Check the signal at the VersiCharge using Wi-Fi Analyzer or other application.
18	IF	The signal is good.
19	THEN	Navigate to the embedded local pages with the IP address and your browser.
20	IF	If the signal remains weak
21	THEN	Test the extended Wi-Fi range by moving your computer or Wi-Fi device to the area with a poor router Wi-Fi signal:
22		Leave your computer or Wi-Fi device in the area with a poor router Wi-Fi signal and return to the extender.
23		Check the Client Link LED (this light should be green) on the extender
24	IF	If the Client Link LED is solid green or amber, your extended Wi-Fi network reaches the area with a poor router Wi-Fi signal and your network setup is complete.
25	IF	The Client Link LED is red, your extended Wi-Fi network does not reach the area with a poor router Wi-Fi signal.
26	THEN	Move the computer or Wi-Fi device closer to the extender until the Client Link LED turns solid green or amber.
27		Check the signal at the VersiCharge.
28	IF	The signal is now strong.
29	THEN	Test signal by opening a browser and go into local embedded web pages and update account information.

6.4 Replacement of wireless router or modem

The new router will have to be set up with the VersiCharge and both the Cloud and local webpages need to have the credentials updated. See 6.2 above and update the new router SSID.

6.5 Not connected to the OCPP server, not reporting software firmware version/serial number

Two conditions can cause this issue: 1. OCPP server outage or; 2. Wi-Fi Module malfunction.

VersiCharge not connecting to the OCPP server, not reporting software firmware version/serial number

OCPP server outage		
1	IF	VersiCharge is not communicating, it may be due to an OCPP server outage. Notify Customer Service of the outage.
2	THEN	Try again later.
1		Turn the breaker to the VersiCharge to OFF.
2		Open the front cover of the VersiCharge.
Troubleshooting the Wi-Fi module		
3		Slide the Wi-Fi Module out of the channel and reseat firmly in channel.
4		Turn the breaker to the VersiCharge to ON; allow time for the VersiCharge reboot.
5		Check Wi-Fi Status light.
6	IF	The VersiCharge is not communicating (Wi-Fi Status not lit),
7	THEN	Call customer service for further instructions.
8	IF	The VersiCharge is communicating (Wi-Fi Status is green or amber)
9	THEN	The Wi-Fi Module is communicating, and cloud connection is possible.

Note: If a new Wi-Fi Module has been provided by Siemens, recommission the VersiCharge by unlinking the charger from the cloud, and follow the commissioning instructions (see 9. Commissioning, below).

6.6 Charger offline/not connected to the VersiCharge SG cloud

- See 5.1 and 5.5 above.
- Note: be aware of network extenders.

6.7   Diagnostics file download feature

Customer service may request a diagnostic zip file be emailed to them. This will be used for further troubleshooting.

NOTE: The charge must either stay in AP mode or in Client mode in order to do this download.

Diagnostics file download

1		Navigate to the cloud, https://versichargesg.cloudapp.net using any smart device or laptop.
2		Select the charger in question.
3		Expand "Charger Info" and note IP address or use an IP address finder like Fing to find the IP address.

4	IF	The Wi-Fi indicator on front panel is in Client Mode (blinking Red/Green or Red/Orange or Red/Yellow) (post-commissioning). See Wi-Fi Status table in section 7 below.
5	THEN	Access the local webpage by inserting the IP address: http://<IP_address_of_the_charger> in a browser address bar.
6	IF	The Wi-Fi indicator is blinking slow Green.
7	THEN	VersiCharge is in Access Point mode.
8		Connect to the access point with the name similar to vs-IACAEAD238 (see sample below). Proceed to the next step.

Sample VS Access Point Name — vs-5000000005.com
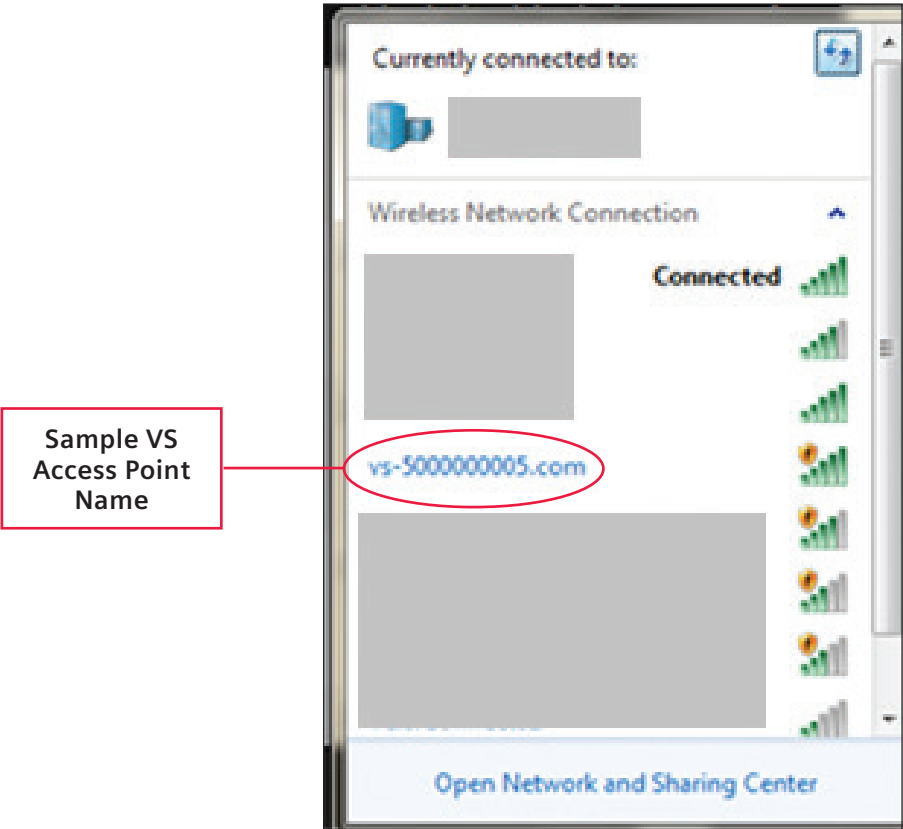
9		Access its local webpage with http://commission.versichargesg.net
10		At the bottom of the Charger Commission page, select Download. There will be no immediate feedback that the button has been pressed. Allow 30-120 seconds. A download file, diag.zip, is being created during this time. When this is complete, diag.zip will download.

11		Email the diagn.zip file to customer service.
12	IF	The Wi-Fi Status indicator is in any other state,
13		Turn the VersiCharge circuit breaker to OFF>
14	THEN	Open cover and note state of Wi-Fi LED at tip of Wi-Fi module. You will not be able to access the local webpage.
15		Replace the VersiCharge cover
16		Turn the circuit breaker back ON.
17		Call Customer Service

SECTION 7

VersiCharge Cloud Connection Troubleshooting

The Wi-Fi LED on the VersiCharge will indicate that it is connected to the local Wi-Fi network, but does not have connection to the VersiCharge SG Cloud. The Wi-Fi LED will alternate between colors following the sequences described below.

Wi-Fi status light

| State	Description	Wi-Fi2	Cloud	Notes
Wi-Fi connected to local WLAN - Good Signal - no Internet	Wi-Fi module has established connection to the local wireless network, has a good signal, but has no Internet access		No Connection	Homeowner's Internet is down, but the signal from the EVSE to the router is good, no connection to the cloud, can log on to the EVSE from homeowner;s local network through local webpages
Wi-Fi connected to local WLAN - Fair Signal - no Internet	Wi-Fi module has established connection to the local wireless network, has a fair signal, but has no Internet access		No Connection	Homeowner's Internet is down, but the signal from the EVSE to the router is fair, no connection to the cloud, can log on to the EVSE from homeowner's local network through local webpages
Wi-Fi connected to local WLAN - Weak Signal - no Internet	Wi-Fi module has established connection to the local wireless network, has a weak signal, and has no Internet access		No Connection	Homeowner's Internet is down, but the signal from the EVSE to the router is weak, no connection to the cloud, can log on to the EVSE from homeowner's local network through local webpages

The VersiCharge SG Cloud portal can be accessed by navigating to the website https://www.versichargesg.com. Cloud account login can be used to view all chargers connected to a specific cloud account.

If the VersiCharge is not seen by the cloud it is 1. Not commissioned, or 2. Not communicating with the cloud.

VersiCharge not connecting with the cloud

	NOTE: Be aware of signal extenders and always ensure that the customer is using the 2.4 GHz port on the router/modem.
1	Navigate to the cloud account Settings tab to see a list of all EV chargers related to the account.
2	Ensure that the smartphone/tablet/laptop being used to troubleshoot is connected to the same Wi-Fi network as the VersiCharge attempting to connect to the VersiCharge SG Cloud Portal (use Fing or any IP address recognition application).
3	Ensure that this Wi-Fi router has Internet access by navigating to a website you know works, i.e., www.google.com.
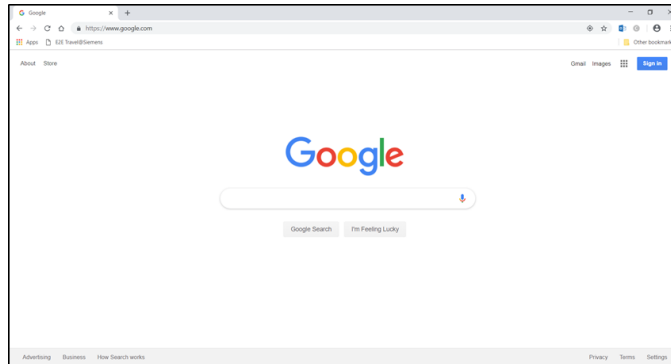
4	Find the MAC address on the front label of the Wi-Fi Module (see 3, What You Will Need to Troubleshoot).
5	Enter the IP address of the charger that you located in the previous step into a browser using a device connected to the same network as the charger.
6	Navigate to the local web page login page (http://commission.versichargesg.net).
7	Provide the charger with the credentials set up for the cloud login to start the second connection attempt to the VersiCharge SG Cloud via the following:
8	Enter the cloud account user credentials (used to set up account registration) to access the local web page. This navigates to the home page of the local web app. While it looks similar to the VersiCharge Cloud it does not have the same functionality.

NOTE: this local web app login is case sensitive for username and password. |
9	Navigate to the Settings tab, far-right bottom. The settings tab holds basic information about the charger, the versions of software currently running on the various processors within the charger, etc.
10	Check that the Cloud information matches the charger's detail. Update any incorrect information and click Submit.
11	• View the following on the Settings page: • MAC address - The MAC address can be used to find the IP address when the router is pinged. • Traceability No. - Also referred to as the serial number and will be used to track all customer support cases. • SG System - The SG System software is referred to as the version on which the communication (Zigbee) processor is running. • Comm Module - displays the code currently running in the Wi-Fi (CTA2045) module.

SECTION 8

Best Practices

- Always stop the car from charging and unplug the car before a charger power cycle.

- Power cycle Wi-Fi modem/router before troubleshooting begins (unplug and plug back in).

- Have the homeowner connect a Wi-Fi enabled device to the Wi-Fi network that they are planning to use for the charger and test.

- Signal strength at installation location.

- Accessing a web page (if Google is used then ask them to actually search for something and wait for results to come up)

- Have the homeowner download the smartphone app Fing to ping devices and locate IP addresses

SECTION 9

IP Address Identification

If you cannot find the IP address and want to manage the VersiCharge using local web pages embedded in the device.

- Find the IP address using any of the methods below. Once you have the IP address, open a browser and put the IP address in the search bar. The browser will connect to the local web pages. This interface will be nearly identical to the cloud app interface shown above, two interfaces with additional event logging and troubleshooting dashboards will be available through the local web pages.

NOTE: Accessing local web pages allows charger operation in the Siemens cloud network, however, you cannot opt-in to utility demand response events. Additionally, by operating off network, VersiCharge cannot be accessed by using either the cloud or smartphone applications.

Using an application

|	
1	Download Fing Network Scanner (recommended free application) to your smart device.
2	Open the application
3	The device will appear with an icon on the left of the screen and the IP address on the right.
4	Enter it in the search browser's address bar
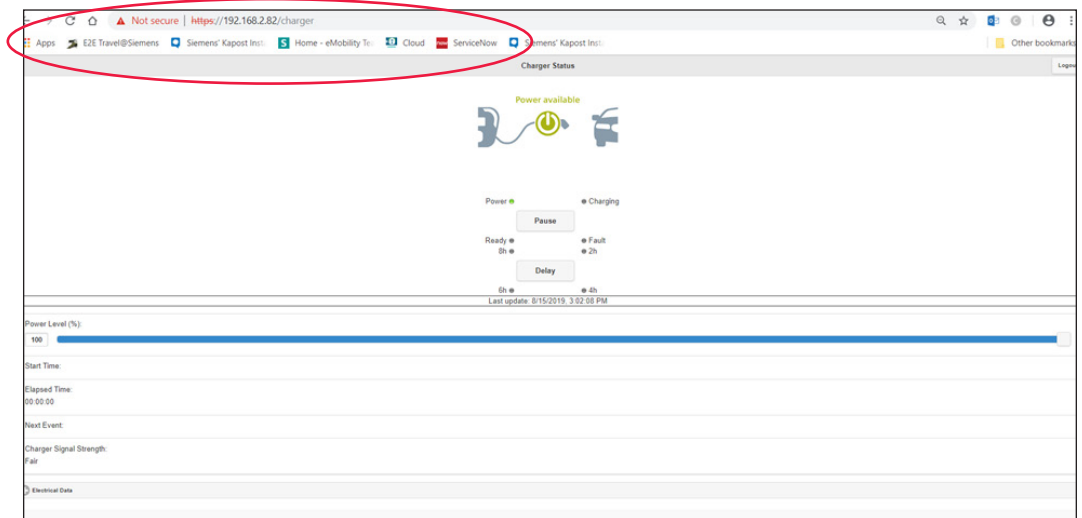
5	Connect to the charger's local web pages.

- This interface will be nearly identical to the cloud app, two interfaces with additional event logging and troubleshooting dashboards wil be available through the local web pages

NOTE: Accessing local web pages allows you to operate your charger in Siemens cloud network, however, you cannot opt-in to utility demand response events. Additionally, by operating off the network, you cannot access the VersiCharge by using either the cloud or smartphone applications.

Using Windows 10

1	Connecting via Wi-Fi
2	Click the Wi-Fi icon in the system tray at the far right of your taskbar.
3	Click the Network settings link.
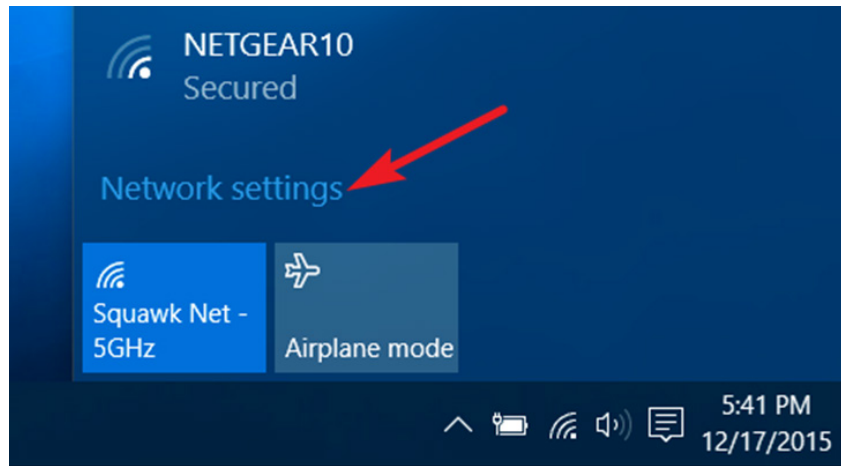
4	Click Advanced options in the Settings window. (You can also reach this window by opening the Settings app and navigating to Network & Internet > Wi-Fi.)
5	Scroll down and you'll see this information in the Properties section.

Using Mac OSX

1	Hold down the Option key and click the Wi-Fi icon (the Option key enables access to status information on the Mac) You'll see your Mac's IP address next to IP address. Other details found here are information about your wireless network and your router's IP address.
2	Open the Apple menu. Navigate to System Preferences > Network.
3	Select your network connection
4	Click Advanced
5	You'll find IP address information on the TCP/IP tab and the MAC address on the Hardware tab.

Using Siemens

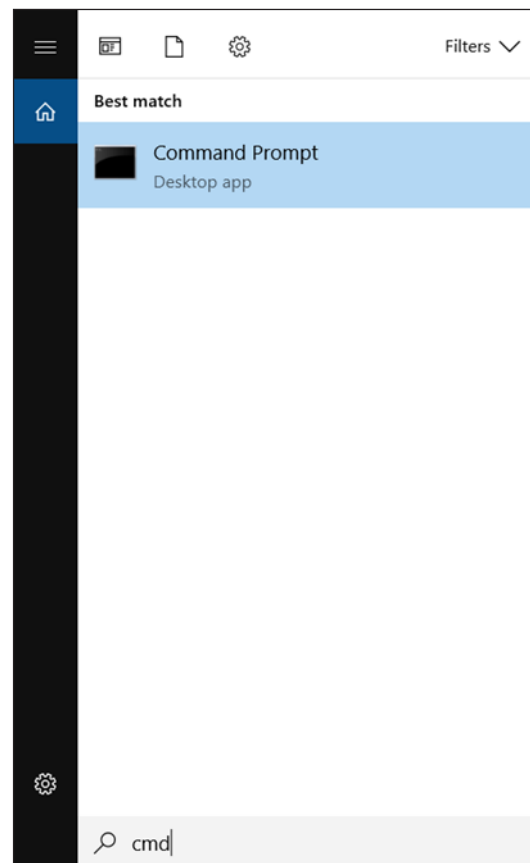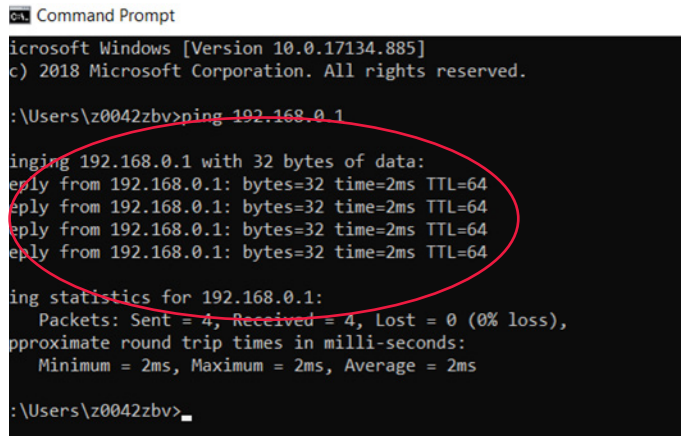| 1	Still can't find the IP address: contact Siemens. The IP address will be provided within12-24 hours via email.

SECTION 10

Preparation For Commissioning

10.1 Prior to commissioning – confirm communication status

Confirm communication status

1		Unplug the car from the charger before troubleshooting.
2		Power cycle the charger by turning the circuit breaker OFF then back ON.
3		Test the network. Ask the homeowner to connect a Wi-Fi enabled device to the Wi-Fi network that they are using for the charger and:
4		Access any web page, i.e., Google.com
5		Ask customer to search for something and wait for results.
6	IF	Search failed - the network is not communicating.
7	THEN	Reboot the router.
8	IF	Search is successful, the router is communicating.
9	THEN	Ping the VersiCharge using the IP address.
10		Find the IP address. Ask the homeowner to download the free smartphone app *Fing* to locate IP addresses.

- Ping a device by accessing the Command Prompt on a computer that is connected to the network,
- Insert *ping* space and the IP address;
- Press Enter. The computer will display device response information.

1. Search for command prompt.
2. Ping the device

11	IF	Device does not return a ping. It is either (1) not powered up or (2) not communicating with the Wi-Fi network.
12	THEN	Review the power and communication status of each device.
13		Device communication confirmed.
14		No further action.

SECTION 11

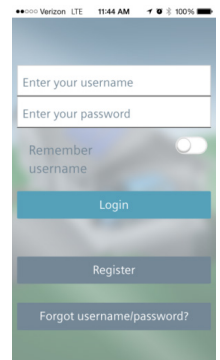# Commissioning

11.1 Smartphone, tablet , and cloud app setup

The ability to control and monitor the VersiCharge SG remotely is what sets Siemens VersiCharge SG apart from previous products and our competitors. There are three different modes of communicating with the VersiCharge SG:

- SmartPhone Application. Download the free smartphone application to use the SG owner-preferred communication method. Search for VersiCharge SG in the App Store for the iOS operating system for the iPhone, or in the Google Play Store for the Android operating system.

- Cloud Application. Using the browser of your choice, you may control and monitor your VersiCharge SG by navigating to the following URL: https://www.versichargesg.com.

- Local Web Pages. In case of a Wi-Fi network failure or outage, you can use your web enabled device to connect to the VersiCharge SG access point (identifiable with prefix "vs"- traceability number). Enter in a new window of your preferred web browser. This will navigate you to the local web pages of the SG; this website has identical functionality as web app.

  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. Faceplate functionality will remain the same.

11.2 User registration

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

- Select "Register"

3 Easy steps:

- Be sure to follow these three easy steps, and read how to create a username and password:

- Step 1: 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: Enter your name and address, this information is used to suggest utilities and rate plans based on your location.

- Step 3: Create an account username and password; enter your email address so you are notified of certain charge events. Note this information somewhere for later use (username and passwords are case sensitive).

- 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 ~

11.3 Linking charger to account

Linking charger to the account

|		
1		Stop charging and unplug the car from the charger before troubleshooting.
2		Ensure the breaker powering the dedicated branch circuit is in the OFF position,
3		Plug in your VersiCharge SG.
4		Turn breaker to ON position.
5		The Power Available LED indicator will turn green, and the Wi-Fi Status LED Indicator will go through the following process: • Indicator should slowly blink red, then switch to slowly blinking 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.
6	IF	The Wi-Fi Status indicator is not blinking green, there may be a signal strength issue.
7	THEN	Test signal strength (see below).
8		Navigate to the following, using a web enabled device (suggested laptop): local webpage URL (https://commission. verischargesg.net/). You are now in the local embedded webpages of the charger.
9		Insert information in each of the fields.

10		Please complete steps 11-15 (all fields are mandatory) and note the information with the username and password used to register the account
11		Enter the Username you established during the app registration process.
12		Enter a Charger nickname of your choosing. Be sure to provide unique names, if you have multiple chargers linked to your account (username and password). The name must be a minimum 1 character and maximum of 10, must contain at least one letter, allowed special characters !, _, and -

Linking charger to the account

13		Enter the Home wireless network SSID (this can be found on the router). This entry is case sensitive. If a range extender is used, be sure to select the 2.4GHz connection. If your home network is password protected, select the check box and enter the wireless network pass code where prompted. If you do not have the password, look up the make/model of the router on the Internet. Each manufacturer provides a default login/password.
14		Select your time zone (defining internal clock of the device for scheduling purposes) and indicate if daylight savings is being observed.
15		Click Submit.
16		Navigate to the cloud and confirm that the charger now appears in the account.
17		Verify that the VersiCharge SG account information, IP address and MAC address are the same in the local web pages as in the cloud. NOTE: unless already commissioned, the IP address and MAC address will not appear in the cloud account.

18		Using your web enabled device of choice (Smartphone or computer) either open the application or go to the cloud app login page: https://www.versichargesg.com.
		     • For Smartphones and tablets you should see the name of your charger at the top of the home screen
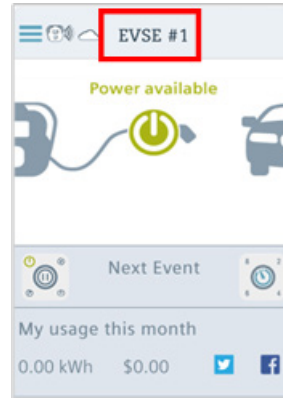		
		     • For the cloud app, you will use the navigation bar to select Settings then Current EV charger to verify the connection

19		Using the credentials established in the "User Registration" step, login to the application.

- This process links your VersiCharge SG to your wireless network and enables communication with the Siemens cloud network.

- Confirm your charger has connected to the chosen network by looking at the Wi-Fi enabled LED, which should change 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 indicates a strong connection to the chosen wireless network.

Testing signal strength

The Wi-Fi enabled LED light remains solid yellow or red; there may be a network strength issue.		

1	IF	Test the signal strength at the location of your installation.
		Suggested Wi-Fi strength analyzers include:
		
		    • For iOS Network Analyzer in the App Store suggest
		    • For Android suggest Wi-Fi Analyzer in Google Play

	THEN	Standing near the VersiCharge, test the signal strength using the application.
	IF	The signal strength is weak or nonexistent.
	THEN	Consider using an Extender that supports 2.4 GHz to improve signal strength or move the router closer to the VersiCharge location.

SECTION 12

Halo Operation

12.1 Halo states

Halo indicator on VersiCharge indicates the status of the charging session.

State mame	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

12.2 Halo deactivation

Deactivate to lower power consumption of your device during normal operation. Note: Deactivation of the Halo will prevent the Halo from illuminating in all states, except the Fault state.

To de/re-activate the Halo:

- Unplug the EV from the chargers 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 lit.

- Press and hold both the Pause and the Delay Timer buttons simultaneously for 5 seconds. The Halo will blink green three times, and then fade to off.

SECTION 13

Decommissioning VersiCharge

Decommissioning of a charger is recommended when there is transfer of ownership (sale) or replacement of new Wi-Fi module. However, it may be necessary to decommission the VersiCharge during troubleshooting. This may be necessary in order to allow the charger to connect to the VersiCharge Cloud from a different Wi-Fi network. Disconnect/decommission the charger from the VersiCharge SG Cloud Portal:

- Navigate to the cloud portal.

- Go to the Settings > EV Chargers web page. Note the name of the charger you want to decommission and the "X" to the right of the charger's name.
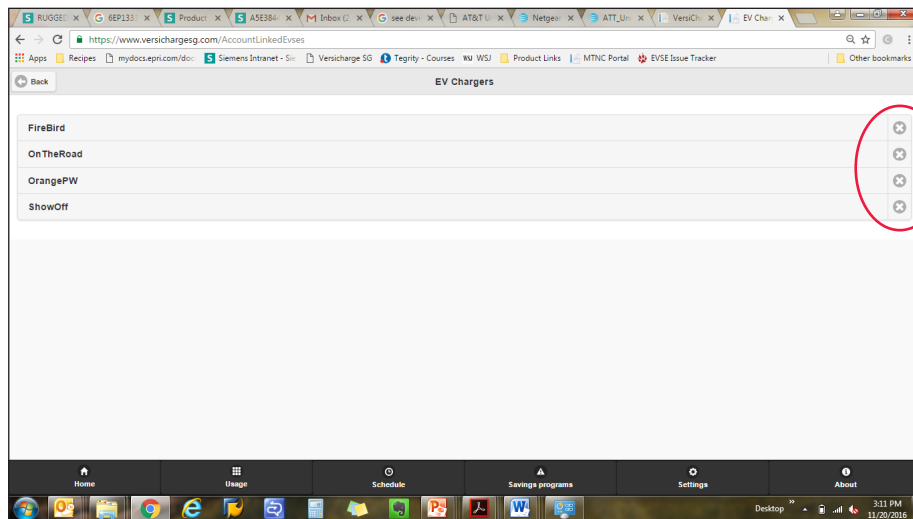
- Click on the X at the end of the line (to the right) displaying the charger name.

- Select Okay in the dialogue popup. The charger is now disconnected and may be connected to a new Wi-Fi network.

NOTE: if the VersiCharge is not seen by the cloud, it is not communicating with the cloud and cannot be decommissioned.

Passwords

Passwords are set at the time of cloud registration. The cloud account communicates with the VersiCharge through that password and credentials. If there is a password reset to the cloud account, allow 24 hours for the cloud to communicate with the VersiCharge.

To change a password:

- Login to Settings > Password
- Input the old password, the new password, and confirm the new password.
- Select Change Password at the bottom of the page.

SECTION 15

Additional Information

To find: Amps, Adjusted Amps, volts, Kw, and KwH.

- Navigate to the bottom of the Home page to find the Amps, etc.:

- Amps - Current Amps at which the VersiCharge SG is charging.

- Adjusted Amps - The position of the amperage adjustment dial inside the charger.

- Volts - Should be close to 208 or 240V.

- Kw - Power rate at which the charger is charging – controlled by vehicle.

- Kwh - Continuous register of energy that has been provided by this charger.

- Navigate to the Events page, bottom-center of the screen. Locally stored events may assist in trouble shooting and may be useful to customer support. Note: The event tab displays the most recent events captured by the charger. These events are only helpful when the charger is not connected to any cloud and is not transmitting event data.

- Navigate to the Schedule page, bottom-left (next to Home) of the screen. Ensure there is no schedule being executed for charging, when this should not be the case, i.e., if the user or the utility has not set a schedule or event. Note: a schedule can be set locally on the charger.

- Navigate to the Meter page, bottom-right, the user can check if the charger has still been charging, even though the charger may be disconnected from the network. Metering events are transmitted to the cloud when network connection is restored, so this data helpful during a network outage.

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