

LED AND RFID GUIDE

VersiCharge™ AC

Electric vehicle charging station

July 2024



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SECTION 1

Commissioning

1.1 Managing and using RFID

The charger supports various authentication methods via OCPP.

In addition, it is possible to save the user IDs of authorized RFID cards in a local list.

NOTICE

The authorization list created via the Admin RFID card is different from the list created via OCPP. The OCPP authorization list can only be managed via the OCPP and not via the Admin RFID card. These two lists are not synchronized.

1.1.1 Using RFID

With RFID cards, users can authenticate themselves to start or end a charging process.

Authentication via Modbus controller or OCPP server is also possible. Authentication can also be disabled in this way.

The supplied RFID User cards are not unlocked.

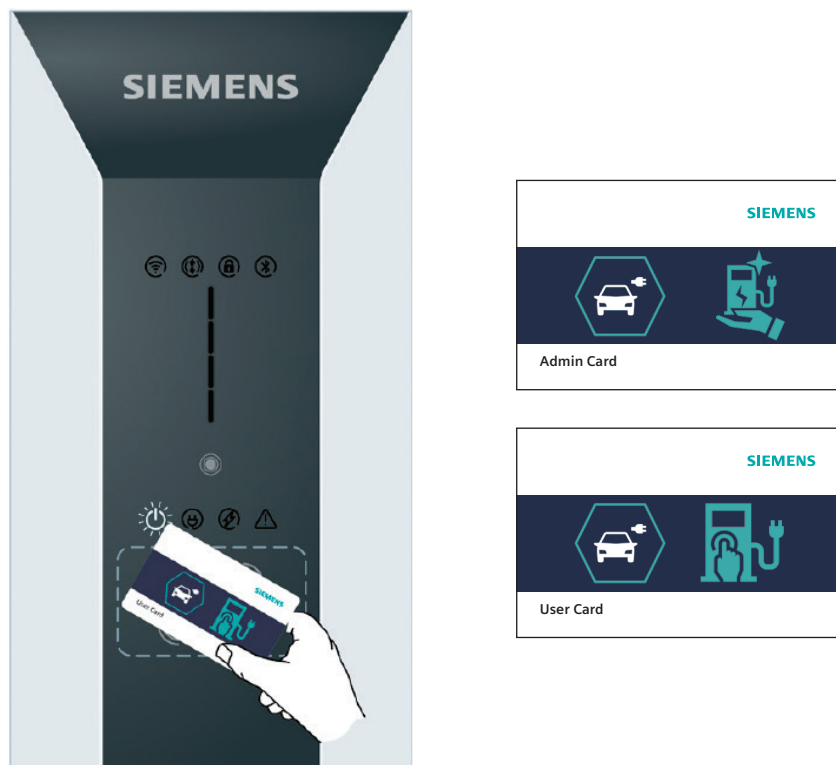


Figure 1-1 RFID card types

Switching on the RFID function

You can switch the RFID function on and off as follows: `

- On the device with firmware version 2.135 or higher:
 - Check if the required charging point is ready for operation:
 - The status LED lights up green.
 - Or the status LED lights up green and pulses purple (Uncommissioned Mode).
 - Hold an Admin card in front of the RFID reader.
 - A brief acoustic signal (a beep) is emitted.
 - The two LEDs in the center of the status LED light up purple. (RFID management mode)
 - Press the touch button to switch the RFID function on or off.
 - The status LED Authentication lights up/extinguishes.
 - Hold an Admin card in front of the RFID reader to end RFID management mode.

NOTICE

To switch on the RFID function with the app or the OCPP backend, you need to finish commissioning.

- Sifinity Go App: Follow the instructions in the app.
- OCPP backend: Change the corresponding settings in the backend.

Supported RFID cards

For authentication, the charger has an integrated RFID reader that is deactivated at the factory. The following table lists the supported chip types.

Table 1-1 Supported chip types

Card series	Memory	Security	Supported protocols
MIFARE Classic	1 K, 4 K	Crypto1	ISO14443A Part 1–3
MIFARE Plus	1 K, 2 K, 4 K	AES, Crypto1	ISO14443A Part 1–4
MIFARE DESFire	2 K, 4 K, 8 K	AES, 3DES	ISO14443A Part 1–4
MIFARE Ultralight	40, 48, 128, 144	None, 3DES	ISO14443A Part 1–3

1.1.2 Managing RFID

You can manage the RFID cards via the following channels:

- Local RFID list via Admin RFID cards
- Modbus controller
- OCPP-based server: Directly via the server

The management of RFID cards via Admin cards in the local list is described under Adding or removing RFID cards, section 1.1.3.

For the Modbus method, see Siemens Industry Online Support (<https://support.industry.siemens.com/cs/de/de/view/109814359>).

For the OCPP-based method, see OCPP Implementation Guide (<https://support.industry.siemens.com/cs/ww/en/view/109814941>).

1.1.3 Adding or removing RFID cards

A list containing all User cards for which approval is given is saved locally in the charger.

NOTICE

Store Admin cards carefully

The scope of delivery of the VersiCharge includes 2 Admin cards and 5 User cards. These Admin cards are uniquely assigned to the VersiCharge. Store the Admin card carefully because management of the RFID cards becomes complicated if the Admin card is lost. A different Admin card is not compatible with the VersiCharge.

1.1.3.1 Adding/removing RFID cards prior to firmware version 2.135

NOTICE

The acoustic and optical signals of the charger can vary depending on the firmware version. For firmware versions after 2.135, see section Adding/removing RFID cards after firmware version 2.135 (Page 7).

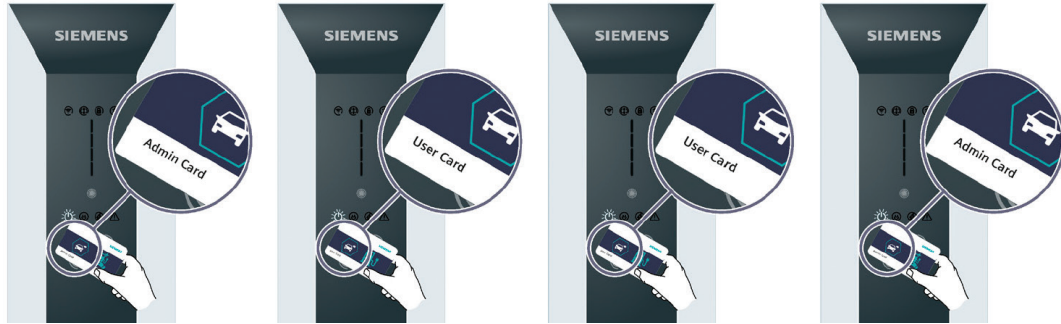


Figure 1-2 Adding or removing RFID cards prior to firmware version 2.135

1. Hold an Admin card in front of the RFID reader. A brief acoustic signal (a beep) is emitted.
It is now possible to manage the RFID cards.
2. Adding and removing:
 - Hold a new User card in front of the RFID reader. A brief acoustic signal (a beep) is emitted.
The new User card has been added to the list.
 - Hold a released User card in front of the RFID reader. A brief acoustic signal (a beep) is emitted.
The User card has been removed from the list.
3. Hold another User card in front of the RFID reader to add User cards to the list or remove them from the list.
Repeat this action as often as needed.
4. Hold an Admin card in front of the RFID reader to end management of RFID cards. A brief acoustic signal (a beep) is emitted.

1.1.3.2 Adding/removing RFID cards after firmware version 2.135

NOTICE

The acoustic and optical signals of the charger can vary depending on the firmware version. For firmware versions prior to 2.135, see section 1.1.3.1, Adding/removing RFID cards prior to firmware version 2.135 (Page 6).

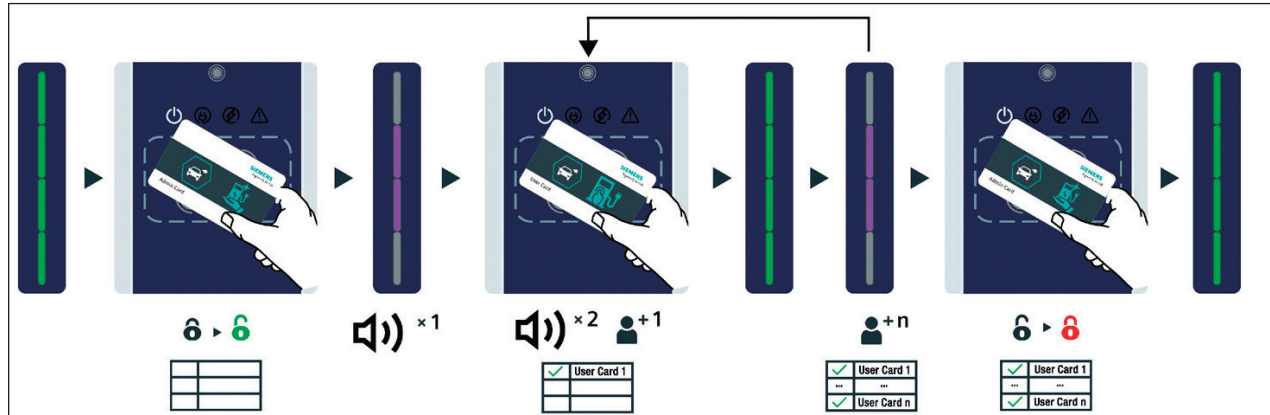


Figure 1-3 Adding RFID cards after firmware version 2.135

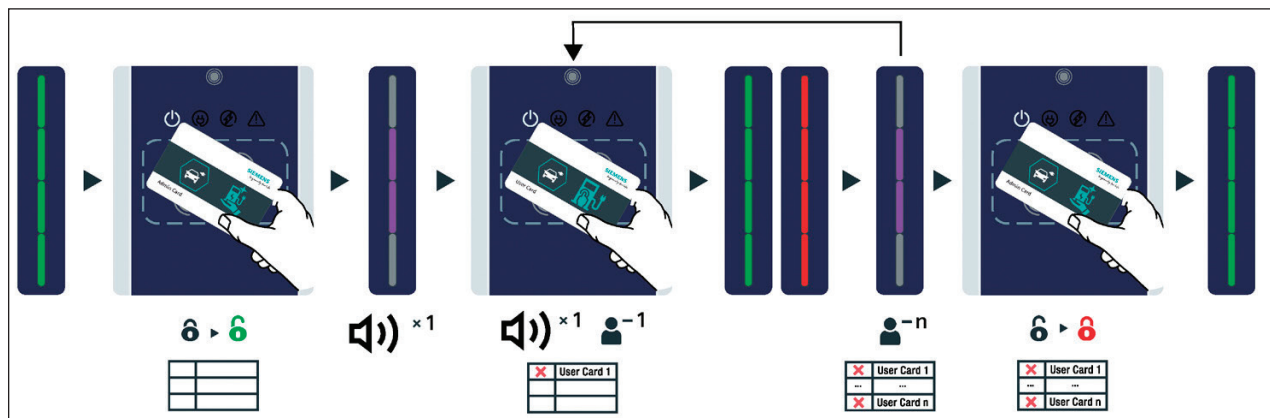


Figure 1-4 Removing RFID cards after firmware version 2.135

You can add or remove RFID cards regardless of whether the RFID function is enabled. To do so, follow the instructions below:

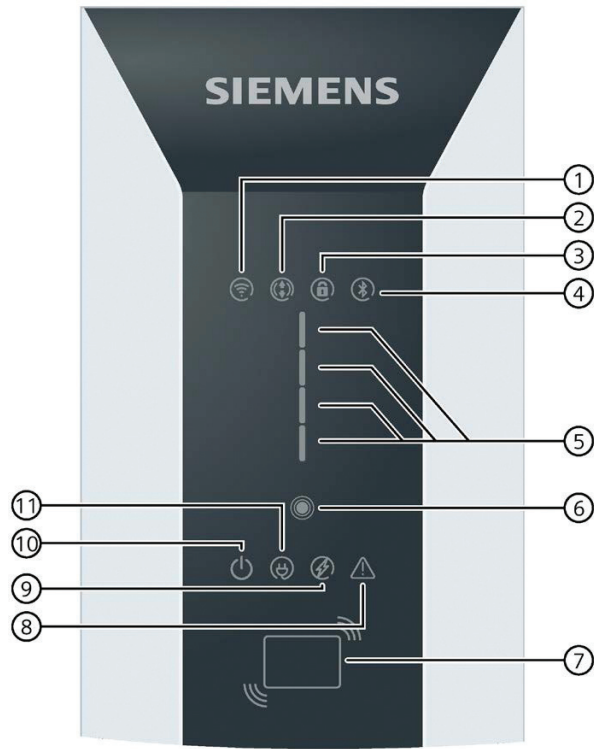
1. Hold an Admin card in front of the RFID reader.
2. A brief acoustic signal (a beep) is emitted.
3. The two LEDs in the center of the status LED light up purple. It is now possible to manage the RFID cards.
4. Adding a User card
 - Hold a new User card in front of the RFID reader.
 - A brief acoustic signal (two beeps) is emitted and the status LED lights up completely in green.
 - The new User card has been added to the preconfigured list.
5. Removing a User card
 - Hold a released User card in front of the RFID reader.
 - A brief acoustic signal (a beep) is emitted and the status LED lights up first completely in green and then in red.
 - The User card has been removed from the preconfigured list.
6. After this, the two LEDs in the center of the status LED light up purple again.
7. Hold another User card in front of the RFID reader to add User cards to the preconfigured list or remove them from the list. Repeat this action as often as needed.
8. Hold an Admin card in front of the RFID reader to end management of RFID cards.
9. A brief acoustic signal (a beep) is emitted and the status LED lights up green.

SECTION 2

Operation

2.1 Operation prior to firmware version 2.135

2.1.1 Status indicators

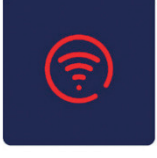
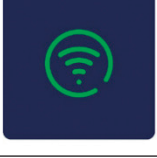


- ① Status LED Wi-Fi
- ② Remote control
- ③ Front panel locked
- ④ Bluetooth status (not used)
- ⑤ Status LED for charging status / RFID / time delay / error states
- ⑥ Touch button
- ⑦ RFID reader
- ⑧ Status LED Error
- ⑨ Status LED Charging active
- ⑩ Status LED Power
- ⑪ Status LED Vehicle connected

Figure 2-1 Layout of the user interface prior to firmware version 2.135

2.1.2 HMI functions

2.1.2.1 LED displays

LED display	Description	Charger status
	Status LED Power lights up white	The charger is switched on.
	Status LED Vehicle connected lights up white	The electric vehicle is connected.
	Status LED Charging active lights up white	Charging in progress.
	Status LED Error lights up red	Charger fault Follow the instructions on error diagnostics and troubleshooting in the section Faults (Page 18).
	Status LED Wi-Fi lights up red	The charger has no connection to the internet. Follow the instructions on error diagnostics and troubleshooting in the section Faults (Page 18).
	Status LED Wi-Fi lights up yellow	The charger is connected to the router, but the Wi-Fi connection is weak. Boost the Wi-Fi signal.
	Status LED Wi-Fi lights up green	The charger is waiting for the connection to the internet service provider (ISP) or router.

LED display	Description	Charger status
	Status LED Wi-Fi lights up blue	The charger attempts to connect to Siemens Device Management.
	Status LED Wi-Fi lights up white	The charger is ready for operation (with successful connection and registration in Siemens Device Management)
	Press the touch button once Note: only prior to FW 2.128	Press the touch button once for a 2-hour delay, twice for a 4-hour delay, three times for a 6-hour delay, and four times for an 8-hour delay.
	Press and hold the touch button	The charger is in an error state. Eliminate the fault and then press and hold the touch button for 5 seconds to reset the device. Observe the instructions on error diagnostics and troubleshooting in the section Faults (Page 18).

2.1.2.2 Status LED

LED display	Description	Charger status
	Status LED does not light up	- The vehicle is not charging. - Charging pauses (such as due to load management) - The vehicle pauses the charging. - Charging is complete.
	First LED of the status LED lights up blue	Access denied. Unlocking via RFID/OCPP/Modbus

2.1.3 Charging the vehicle

Proceed as follows to start charging:

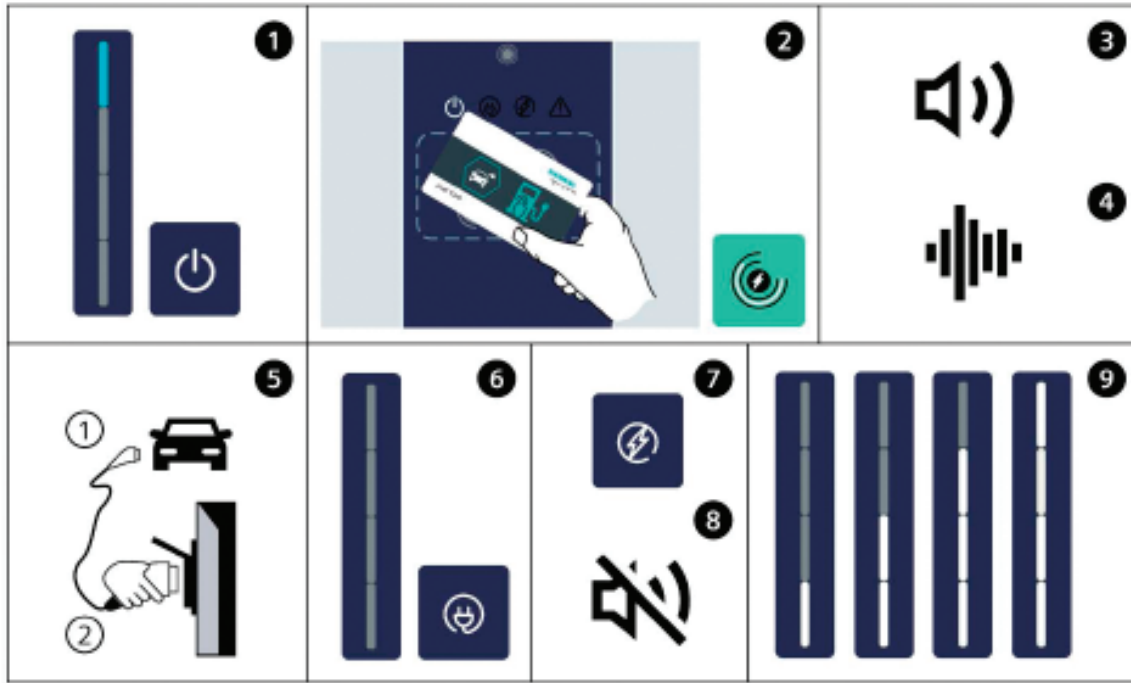
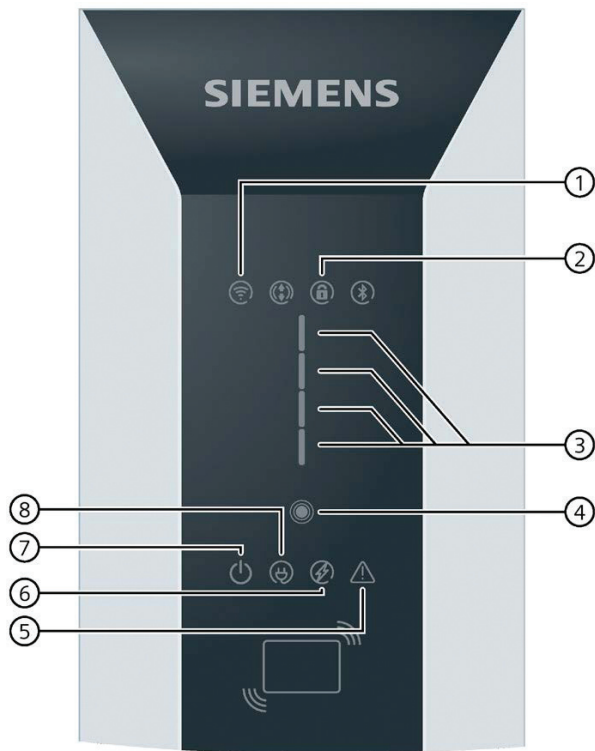


Figure 1-6 Charging the vehicle prior to firmware version 2.135

1. Check if the required charging point is ready for operation:
 - The status LED Power must light up.
 - If the RFID function is active, the first LED of the status LED lights up blue.
2. Authenticate yourself on the charger.
 - If the RFID function is activated, hold your RFID card in front of the card reader.
 - Register with a method supported by the operator (such as through an app).
3. A brief acoustic signal (a beep) is emitted.
4. This is followed by a continuous, alternating acoustic signal.
5. Connect the charger to your vehicle. Make sure that the charging cable is not damp or dirty. Follow also the instructions of the vehicle manufacturer.
The connection to the vehicle is established. This can take some time, depending on the connection and response speed.
6. The blue LED of the status LED extinguishes. Then the charging cable is locked and the “Vehicle connected” LED lights up.
7. Charging starts automatically and the “Charging active” LED lights up.
8. The acoustic signal ends and the vehicle is charging. The lock protects the charging cable from unauthorized disconnection.
9. The status LED lights up white to show that charging is active.
10. The status LED and the “Charging process active” LED extinguish when the charging process is completed or stopped.

2.2 Operation after firmware version 2.135

2.2.1 Status indicators

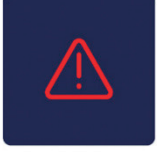


- ① Status LED Connectivity
- ② Status LED Authentication
- ③ Status LED (multifunction display for charging status/error states)
- ④ Touch button
- ⑤ Status LED Error
- ⑥ Status LED Charging active
- ⑦ Status LED Power
- ⑧ Status LED Vehicle connected

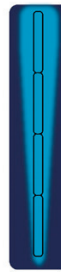
Figure 2-2 Layout of the user interface after firmware version 2.135

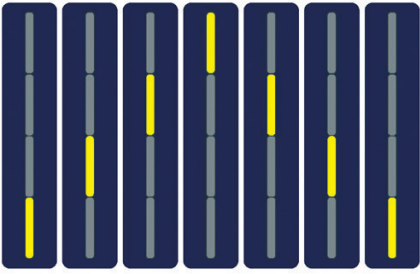
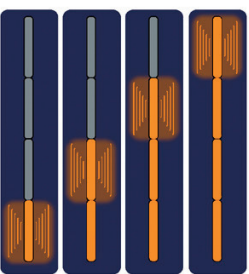
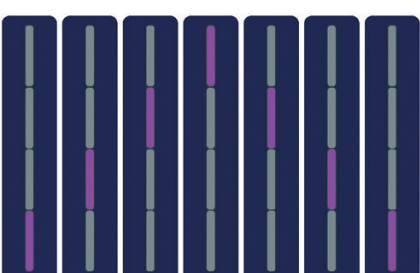
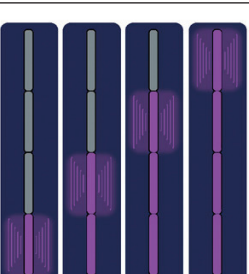
2.2.2 HMI functions

2.2.2.1 LED displays

LED display	Description	Charger status
	Status LED Power lights up white	The charger is switched on.
	Status LED Vehicle connected lights up white	The electric vehicle is connected.
	Status LED Charging active lights up white	Charging in progress.
	Status LED Authentication lights up white	Option 1: OFF = Authentication function disabled Option 2: ON = Authentication function enabled
	Status LED Error lights up red	Charger fault Follow the instructions on error diagnostics and troubleshooting in the section Faults (Page 18).
	Press and hold the touch button	• If the charger is in an error state, press the touch button once to reset the device. Observe the instructions on error diagnostics and troubleshooting in the section Faults (Page 18). • When using an Admin card in uncommissioned mode, press the touch button to switch the RFID on or off. You can find more information in the section Using RFID (Page 3). • After the restart, press and hold the touch button for 15 seconds to reset the charger to factory settings. For more information, refer to the section Resetting the charger to factory settings (Page 19).

2.2.2.2 Status LED

LED display	Description	Charger status
	Green color Status LED lights up	The charger is ready for operation.
	Blue color Status LED ascending	Charging in progress.
	Blue color Status LED lights up	Charging has been ended or stopped by the electric vehicle.
	Red color Status LED lights up	Charger fault Follow the instructions on error diagnostics and troubleshooting in the section Faults (Page 18).
	Yellow color Status LED lights up	Charging interrupted by charger, such as by local load management, OCPP or VersiCloud.
	Yellow color Status LED pulses	Note: The electric vehicle is not ready to charge. User interaction is required (authentication or plugging of charging cable).

LED display	Description	Charger status
	Yellow color Status LED ascending and descending	The authentication process is running and the charger is waiting for charging to start.
	Orange color Status LED pulses, increasing in segments	Booting after the restart.
	Purple color Status LED ascending and descending	Updating the firmware.
	Purple color Status LED pulses, increasing in segments	After the restart, press and hold the touch button for 15 seconds to perform the reset to factory settings. For more information, refer to the section Resetting the charger to factory settings (Page 19).
	Purple color Two LEDs of the status LED light up	RFID management mode In this mode, you can switch the RFID function on or off and add or remove RFID cards. You can find more information in the section Managing RFID (Page 3).
	Green and purple color Three LEDs light up green The top LED pulses purple	Uncommissioned mode The charger is ready for charging, but commissioning has not completed yet. For more information, see the section Uncommissioned Mode (Page 17).

2.2.3 Charging the vehicle

Proceed as follows to start charging:

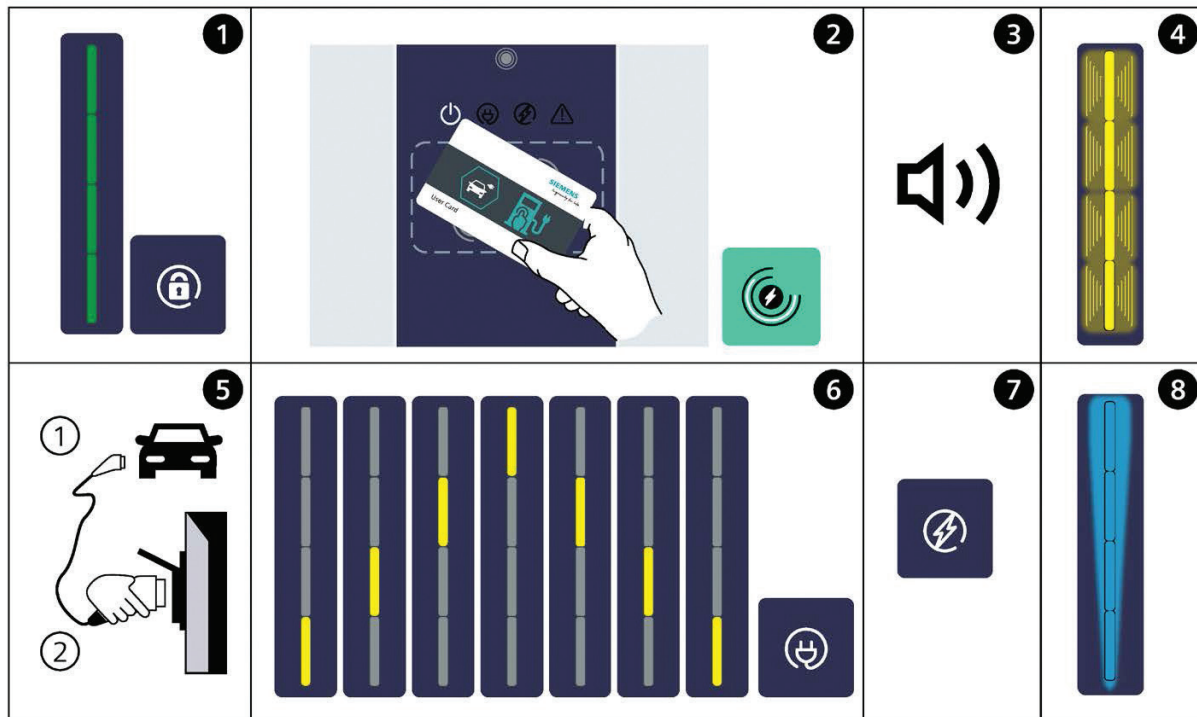


Figure 2-3 Charging the vehicle after firmware version 2.135

1. Check if the required charging point is ready for operation:
 - The status LED lights up green.
 - If the RFID function is active, the status LED Authentication lights up.
2. Authenticate yourself on the charger.
 - If the RFID function is activated, hold your RFID card in front of the card reader.
 - Register with a method supported by the operator (such as through an app).
3. A brief acoustic signal (a beep) is emitted.
4. After this, the status LED pulses yellow.

NOTICE

If the authentication process fails, a brief acoustic signal (a beep) is emitted and the status LED lights up red. Observe the instructions on error diagnostics and troubleshooting in the section Faults (Page 18).

5. Connect the charger to your vehicle. Make sure that the charging cable is not damp or dirty. Follow also the instructions of the vehicle manufacturer.
The connection to the vehicle is established. This can take some time, depending on the connection and response speed.
6. Then the charging cable is locked and the “Vehicle connected” LED lights up. In addition, the status LED lights up yellow ascending and descending.

NOTICE

This process can be very short. The charger checks that charging is released.

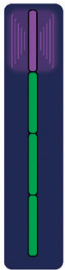
7. Charging starts automatically and the “Charging active” LED lights up.
8. The status LED lights up blue ascending.
9. The vehicle is charging. The lock protects the charging cable from unauthorized disconnection.
10. The status LED lights up blue and the “Charging process active” LED extinguishes when the charging process is completed.

2.3 Uncommissioned Mode

NOTICE

Uncommissioned Mode only works if the charger has firmware version 2.135 or higher.

The charger is ready for charging, but commissioning is not completed yet. Three LEDs of the status LED light up green and the top LED pulses purple.



Note that the following functions are not available in this mode:

- Connection with Siemens backend system
- Connection with OCPP backend
- Connection and control via network, smartphones and digital terminals
- Centralized monitoring, maintenance and evaluation
- Firmware updates

SECTION 3

Faults

3.1 General Troubleshooting Guide

If the status LED lights up red, the charger has a fault and charging is not possible.

The vehicle is connected

1. Pull the charging cable out of the vehicle.
2. Wait for 10 to 15 seconds.
3. Connect the charger to your vehicle.
4. If the charger continues to light up red, pull the charging cable out of the vehicle and follow the instructions in the paragraph below.

The vehicle is not connected

1. Press the touch button once and then check that no more red LEDs are lighting up on the charger.
 - Then try to start charging again.
2. If the red LEDs persist, switch off the circuit breaker for the charger. Wait 1 to 2 minutes before turning the power back on.
3. Wait for up to 15 minutes and check whether the red status LEDs have extinguished.
 - Prior to FW version 2.135: The status LED Wi-Fi in the top left area of the charger lights up white.
 - As of FW version 2.135: The status LED Connectivity is off.
4. Start a charging process. If this is successful, no further troubleshooting is required.
5. If the red LEDs remain lit, try the above troubleshooting steps two more times.
6. If the problem is not resolved, open a service ticket on the internet.
 (<https://sieops.my.site.com/eMobilityCloud>) or via the support hotline (855-950-6339, option 9).

Status LED Wi-Fi/Connectivity lights up red

The charger has no internet connection or connection to the VersiCloud

1. Switch off the circuit breaker for the charger. Wait 1 to 2 minutes before turning the power back on.
2. Wait for up to 15 minutes and check whether the charger is found in the software.
 - Prior to FW version 2.135: The status LED Wi-Fi in the top left area of the charger lights up white.
 - As of FW version 2.135: The status LED Connectivity is off.

Status LED Wi-Fi LED flashes blue (only prior to firmware version 2.128)

1. The charger is connected to the internet and is waiting to connect to the Siemens Cloud.
2. Please note that the charger can be connected via OCPP.

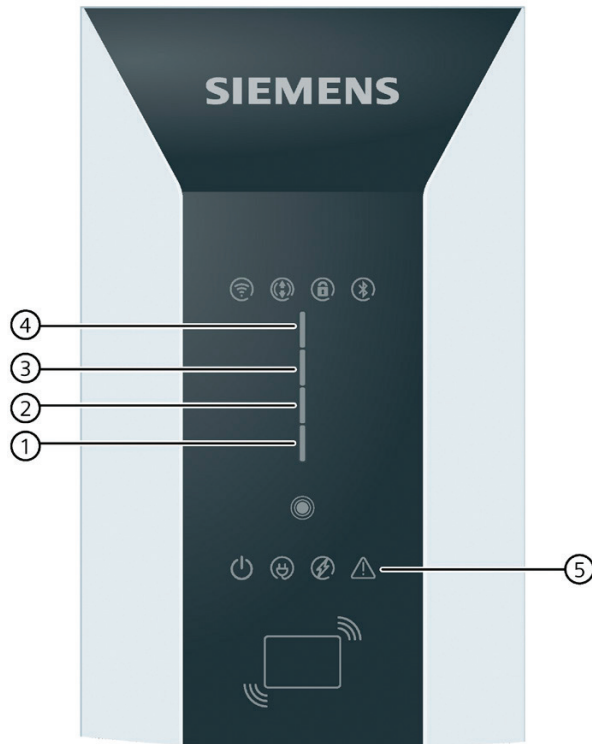
Status LED Wi-Fi LED flashes green (only prior to firmware version 2.128)

1. The charger is waiting for the connection to the internet service provider (ISP) or router.
2. Wait for up to 15 minutes.
3. If the charger continues to flash green, troubleshoot possible problems with the internet service provider or with the router (for Wi-Fi or Ethernet connection).
4. If you are using a cellular network, check the signal strength and make sure the SIM card is activated.

3.2 Troubleshooting Guide for Technical Support

Follow the instructions below to clear/rectify a specific error in the charger:

1. Press the touch button once.
2. The status LED lights up in a specific LED combination for 20 seconds. This specific LED combination will be provided in the service ticket (<https://sieops.my.site.com/eMobilityCloud>) or via the support hotline (855-950-6339, option 9).



- ① Fault LED 1
- ② Fault LED 2
- ③ Fault LED 3
- ④ Fault LED 4
- ⑤ Status LED - Error

Figure 3-1 Visual HMI Elements

3.3 Resetting the charger to factory settings (firmware version 2.135 or higher)

Resetting to factory settings with a touch button

After the restart (switching the power supply off and on), you have 30 minutes to reset the charger to factory settings:

NOTICE

Make sure that booting (Status LED pulses orange, increasing in segments) is complete after the restart and the charger is ready for operation (Status LED lights up green).

1. Press and hold the touch button for 15 seconds.
2. Status LED pulses purple, increasing in segments.
3. The start of the reset process is signaled by a beep.
4. The factory reset is performed (this takes approximately 15 minutes).
5. The boot sequence starts. Status LED pulses orange, increasing in segments.
6. The charger goes into Uncommissioned Mode (Page 17).

Authentication after reset to factory settings

- The authentication settings, also when an OCPP backend is used, are retained after the VersiCharge is reset to factory settings.
- The locally configured RFID cards remain saved after the reset to factory settings.

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questions or inquiries.

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