## solaredge

SolarEdge EV Charger
Configuration Manual
Version 1.00

### **SolarEdge**

# EV Charger Electric Vehicle Charging Station Configuration manual V 1.00

Translation of the original instructions



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Customer Support SolarEdge Technologies

https://www.solaredge.com/service/support

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Introduction EV Charger

#### 1 Introduction

This document refers to the following devices:

SolarEdge EV Charger with software version 1.12.1

The device variant can be determined by the product designation on the type plate. The software version can be read out via the web interface. For more information, see the "Operating instructions".

The pictured devices used in this manual are visual examples. The figures and explanations contained in this manual refer to a typical device design. The devices used by you may differ in their appearance.

EV Charger Introduction

#### 1.1 Representation of safety instructions

At various points in this manual, you will see notes and precautionary warnings regarding possible hazards. The symbols used have the following meaning:



#### DANGER!

indicates an imminently hazardous situation, which will result in death or serious bodily injury if the corresponding precautions are not taken.



#### WARNING!

indicates a potentially hazardous situation, which can result in death or serious bodily injury if the corresponding precautions are not taken.



#### CAUTION!

means that if the corresponding safety measures are not taken, a potentially hazardous situation can occur that may result in slight bodily injury.

#### Caution

means that damage to property can occur if the corresponding safety measures are not taken.



#### **ESD**

This symbol reminds you of the possible consequences of touching electrostatically sensitive components.

#### Information

Identifies practical tips and useful information. No information that warns about potentially dangerous or harmful functions is contained.

Introduction EV Charger

#### 1.2 Purpose of the document

This document describes the configuration of the advanced features of SolarEdge EV Charger after it has been installed. This includes, among other things, the description of the settings in the web interface.

This document is an extension to the supplied manuals of SolarEdge EV Charger.

You must comply with all instructions and safety instructions in the supplied manuals!

#### 1.3 Requirements

This document contains information for persons with the following requirements:

Target group	Required knowledge and abilities
	Person who, due to his or her special training, expertise and experience as well as knowledge of current standards, is able to assess the work performed and the possible hazards.
	Knowledge of:
	current valid safety information,
Electrician	the mode of operation of the charging station,
Licotrolari	the displays and operating elements of the charging station,
	<ul> <li>basics of network technology,</li> </ul>
	basics of IT,
	diagnostic options,
	systematic fault analysis and rectification,
	<ul> <li>the setting options on the charging station.</li> </ul>

#### 1.4 Warranty

Only general maintenance work that is expressly permitted by SolarEdge Technologies may be performed. Any other tampering to the device will result in a loss of the warranty claim.



#### **WARNING!**

#### Risk of electric shock and fire hazard!

After the front part has been opened, product safety can no longer be guaranteed.

Only those covers that are described in the procedure instructions are allowed to be opened. If one of the covers is sealed by a lead seal, it is not permitted to be opened by unauthorized persons. If the lead seal is broken, the device loses its specific suitability for use and may no longer be put into operation due to the resulting incorrect identifier.

EV Charger Introduction



Fig. 1-1: Screws on the front part

The front part 1 must not be opened. Opening the front part (4 Torx screws) will break the manufacturer's seal and void the warranty claim. For a warranty claim, there is a duty of proof of the customer that the defect – which led to the defect of the device – already existed at the time of delivery. If the manufacturer's seal is broken, this proof can no longer be provided, resulting in expiration of the warranty claim.

A device with a broken manufacturer's seal or removed lead seal may no longer be put into operation. The necessary steps must be taken for having the charging station replaced or repaired by a specialist dealer or service partner.

#### 1.5 Notes on this document

The manual is part of the product. It is to be retained over the entire life cycle of the product and should be forwarded to any subsequent owners or users of the product.

The instructions contained in this manual must be followed precisely. Failure to do so could result in the creation of potential sources of danger or the disabling of safety devices. Apart from the safety instructions given in this manual, the safety precautions and accident prevention measures appropriate to the situation in question must also be observed.

#### 1.5.1 Contents of the document

Configuration of the advanced features of SolarEdge EV Charger

#### 1.5.2 Not contained in this document

- Commissioning and deinstallation of the charging station
- Operating behavior of the charging station
- Operation of the charging station

Introduction EV Charger

#### 1.6 Further documentation

Manuals and additional information are available on our website: www.solaredge.com/resource-library

EV Charger System overview

#### 2 System overview

SolarEdge EV Charger communicates with the SolarEdge Technolo-gies OCPP backend. The charging station is equipped with different network interfaces for these functions.

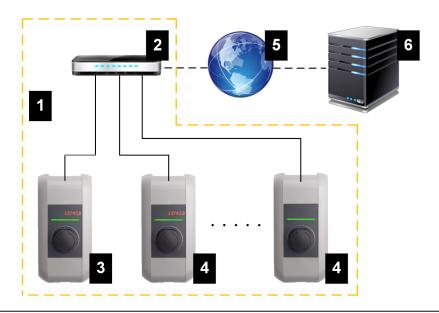


Fig. 2-2: Example network setup

1 Local charging network	2 Router/Switch
3 Master charging station (x-series)	4 Client charging station (c-series)
5 Higher-level network/Internet	6 OCPP backend

The following chapters describe which network interfaces SolarEdge EV Charger (master charging station) provides and how to set up a master/client network.

#### 2.1 Network interfaces

SolarEdge EV Charger provides the following network interfaces (e.g. for connection to an OCPP backend, ...):

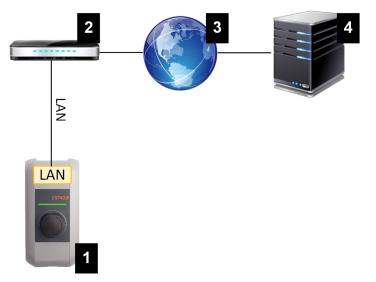
- LAN
- WLAN (optional)
- WLAN access point (optional)

Client charging stations can only be connected via LAN to SolarEdge EV Charger (master charging station).

System overview EV Charger

#### 2.1.1 LAN

SolarEdge EV Charger can be connected to a router via the inte-grated LAN interface. The router establishes a connection to an OCPP back-end via internet.



1 SolarEdge EV Charger	2 Router
3 Internet	4 OCPP backend

Connection: Ethernet1 connection (LSA+®)

Via the LAN interface, SolarEdge EV Charger can also be connected to other charging stations, allowing to implement a charging network.

#### Information

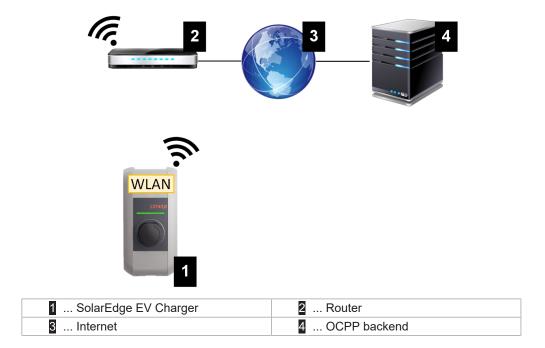
The Ethernet1 connector X4 (LSA+ $^{\circ}$ ) and the Ethernet2 connector X3 (RJ45) are connected in parallel on the PCB and cannot be used at the same time. The unused connection must be disconnected if necessary (e.g. during servicing).

The Ethernet1 connection X4 is designed as a terminal block in LSA+® technology. It is recommended to implement hard-wired communication (e.g. for SmartHome or a charging network) at the LSA+® connection.

#### 2.1.2 WLAN (optional)

SolarEdge EV Charger can be connected to a router via the inte-grated WLAN interface. If the router is connected to the Internet, a connection to an OCPP backend can be made.

EV Charger System overview



The technical data of the WLAN module can be found in the "Installation Manual".

#### Information

Only a charging station that is operated as a single charging station can be connected to the router via WLAN. A charging station that is part of a charging network (master/client network) must always be connected to the router via LAN.

System overview EV Charger

#### 2.1.3 WLAN Access Point (Hotspot) (optional)

SolarEdge EV Charger can be connected to a mobile device via the integrated WLAN access point. With the mobile device, the web interface can be easily accessed and the configuration of the charging station can be performed.



1 ... SolarEdge EV Charger

The access data and the IP address of the WLAN access point are listed on the configuration label. The configuration label is in a pouch which is enclosed with the mounting material.

The following steps are necessary to perform the configuration via a mobile device:

- 1) Connect a mobile device to the WLAN access point.
- 2) Access the IP address of the WLAN access point in a web browser on the mobile device.
- 3) Perform configuration via the web interface, see 4 Web interface.

#### 2.2 Displays and signals

The display on the front of the charging station provides information about which communication connection is established.

Display	Description
blue   blue   blue	Communication is possible throughout the network. The master charging station and the OCPP backend are reachable.
blue   blue   blue   -	Communication between master and client charging stations is possible. The OCPP backend is not reachable or missing.
-   blue   blue   -	Communication between master and client charging stations is not possible. The OCPP backend is not reachable.

EV Charger Configuration

#### 3 Configuration

This chapter describes the necessary configuration for the correct operation of the charging stations. The following steps are necessary for this:

- Set the DIP switch on the charging station
- Configuration (via the web interface or via USB stick)

Depending on the network configuration, activation of the DHCP server on the master charging station may be necessary.

#### 3.1 Connection panel

In the connection panel of the charging station are important interfaces and controls for the configuration of the charging station. To access, the housing cover and the connection panel cover must be removed. The description of removing the covers and the connection panel can be found in the "Installation Manual".

#### 3.2 DIP switch settings

This DIP switch setting must be made for each master and client charging station to enable charging station communication.

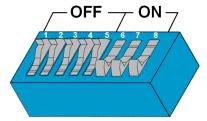
#### Caution

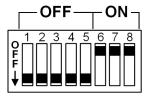
#### Possible damage to the DIP switches!

The DIP switches are rocker switches and not slider switches. The DIP switches must be pressed and must never be slid.

#### **ON/OFF** position of the rocker switches

The illustration shows the position of the rocker switches for the setting ON and OFF





The DIP switches are located under the connection panel cover. The following figure shows only the affected DIP switches, others are not shown. The following setting must be made on the DIP switch DSW2:

Configuration EV Charger

#### **Activation of communication - DSW2.5**

Fun	ction	Figure
Activation of communication		12345678
This DIP switch setting must be client charging station to enabtion.	e made for each master and e charging station communica-	F

#### Information

Changes to the DIP switch settings only become effective after a restart of the charging station!

To restart, press the "Service button" until the first beep (approx. 1 second) or switch off the charging station for a short time via the line circuit breaker.

EV Charger Web interface

#### 4 Web interface

The necessary settings (main menu "Configuration") for the communication of the charging station are configured in the web interface. The configuration for the entire charging network is done via the master charging station.

A network connection is required to access the web interface of the master charging station. The network connection can be made via LAN, WLAN, WLAN access point or mobile communications (e.g. with PC or mobile terminal).

The master charging station web interface can be accessed by entering the IP address of the master charging station in a web browser.

The IP address of the master charging station is determined differently depending on the connection type.

WLAN access point	The IP address of the WLAN access point is printed on the configuration label.
Router with integrated DHCP server	The charging station automatically receives an IP address via the DHCP server of the router. The IP address is displayed on the charging station display when the charging station is (re)started. The IP address can also be determined via the router.
Master charging station	The local DHCP server has been activated for the master charging station, which automatically gives the master charging station the following IP address: 192.168.42.1
with local DHCP server	The DHCP server of the charging station is deactivated in the delivery state and can be activated via the configuration in the web interface.

A login is required to use the web interface.

The login data for the first login in the web interface is printed on the configuration label. The configuration label is in a pouch affixed to the installation materials. For security reasons, change the password after the initial login. In doing so, observe the password guidelines, refer to 4.2 User menu.

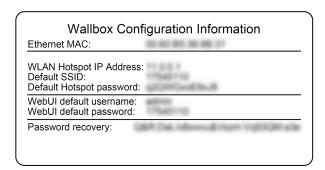


Fig. 4-3: Configuration label

After successful login, the start page of the web interface opens.

The following chapters provide an overview of the possibilities of the web interface. A detailed description of the individual configuration options can be found directly in the web interface next to the respective configuration entry.

Web interface EV Charger

The actual size of the web interface may differ depending on the device variant.

#### 4.1 Main menu

The main menu is divided into the following areas:

- Status
- Charging Sessions
- RFID Cards
- Charging Network
- System
- Configuration

#### 4.1.1 Status

This page is divided into the following sections:

#### Overview

Here, basic information about all charging stations in the charging network is displayed (such as serial number, IP address, operating state, etc.).

When the respective IP address is clicked, a new browser window displays information about the charging, such as total energy, energy of a charging session, power, voltage, current, status and event log. The scope of the displayed information is variant-dependent.

An "Actions" button is located next to each listed charging station. When the button is clicked, the following functions are available:

Start Charging	Authorizes a charging session without an RFID card having to be held before the sensor. This function is only available with the authorization function enabled.
Stop Charging	Ends the active charging session.
Restart	Restarts the charging station.
Unlock	Unlocks the charging plug on the charging station (not for the vehicle). For an active charging session, the charging session is ended first and then the charging plug is unlocked.

#### **Network Connection**

Here, information about the network interfaces (LAN, mobile communications, WLAN and WLAN Access Point) of the master charging station is displayed.

#### **Backend**

Information about the OCPP backend (such as connection status and address) is displayed here.

EV Charger Web interface

#### 4.1.2 Charging Sessions

This page displays details about the last 200 charging sessions. The "Export" button lets you export the charging sessions of the last 90 days as a \*.csv file.

A currently active charging session is displayed with the "PWMCharging" status. Various filter functions let you search for certain charging sessions. For example, you can filter for charging sessions that have a certain start date or for which a certain RFID card was used.

#### 4.1.3 RFID Cards

This page provides an overview of all stored RFID cards including their authorizations. RFID cards can be taught-in, edited and deleted. RFID cards can also be exported and imported as \*.csv file.

#### 4.1.4 Charging Network

The configuration of the charging network is carried out in this area.

The area offers the following options:

- Charging Network Parameters
- Chargepoint Parameters

#### **Charging Network Parameters**

The nominal supply voltage of the charging station is selected here and the current limits for the charging network can be set.

With 1- or 2-phase charging vehicles, asymmetrical loading of the 3 phases may occur. For such vehicles, the maximum charging current can be set in this area. The charging station then detects whether the vehicle is a 1-, 2- or 3-phase charging vehicle and, if necessary, reduces the charging current to the set value. If "0" is entered, this function is deactivated.

You can also set whether charging should continue after a power failure. This setting is disabled by default.

#### **Chargepoint Parameters**

The connection type (1-phase or 3-phase) of the charging station is selected here. For a 1-phase connection, the power cable wire that is used can also be selected. For a charging network, the connection type of the slave charging stations can also be selected.

If a slave charging station loses the connection to the master charging station, or if an error occurs at the master charging station, a specification can be made for the maximum charging current at which charging is to be continued. If "0" is entered, the charging process is terminated in the event of an error and the charging station is put into "out of operation" mode.

Web interface EV Charger

#### 4.1.5 System

Der Bereich bietet folgende Auswahlmöglichkeiten:

- Software Update
- Mobile Communications Info
- WLAN Access Point Info
- Logging
- DSW Settings
- Factory Data Reset
- Signed measurement data export
- Signed log data export
- Restart System

#### Software-Update

The currently installed software versions are displayed. A software update can also be performed here.

#### **Mobile Communications Info**

Information about the mobile communications connection is displayed and the connection to the selected mobile communications network can be tested.

#### **WLAN Access Point Info**

The state of the WLAN access point (hotspot) is displayed.

#### Logging

The event log can be downloaded here.

#### **DSW Settings**

The DIP switch settings of each charging station in the charging network can be displayed here.

#### **Factory Data Reset**

The "Reset" button resets the configuration of the charging station to the factory settings and all stored data (charging sessions, taught-in RFID cards, web interface password, etc.) is deleted.

#### Signed measurement data export

The signed measurement data records can be exported here, which can be used for billing charging sessions. This function is only available for device variants with specific suitability.

EV Charger Web interface

#### Signed log data export

The signed log data records containing an event log can be exported here. This function is only available for device variants with specific suitability.

#### **Restart System**

The master charging station can be restarted using this button.

#### Certificates

For an encrypted connection, certificates can be imported in \*.pfx format. The connection to the web interface, OCPP backend and charging station can be encrypted. The following certificates are available:

#### WebUI certificates

Certificate	Purpose
Https WebUI	Encrypted connection to the web interface

#### 4.1.6 Configuration

The configuration of the charging station is carried out in this area.

#### Information

The DIP switch settings are independent of the web interface configuration and cannot be overwritten by software.

The area offers the following options:

- Operating mode
- Device
- Charging network parameters
- Chargepoint parameters
- Network connection
- Certificates
- WLAN access point
- Proxy
- OCPP
- External TCP meter
- Display text

#### Information

The settings made are only applied after the "Apply" button has been pressed.

Web interface EV Charger

#### **Operating Mode**

Here you can determine whether the charging station is operated as a single charging station or as a master charging station in a charging network.

The number of clients must be entered for a charging network. In addition, all attached client charging stations must be entered with their respective serial numbers. Otherwise, the client charging station will not be recognized by the master charging station in the network. The serial number is printed on the rating plate of the client charging station.

Both the master charging station and all attached client charging stations can be enabled ("available") or disabled ("out of service") individually. If the charging station is disabled during a charging process, the charging process will be stopped. When the charging station is disabled, the LED bar slowly flashes orange and the display shows that the charging station is out of operation.

#### **Device**

The basic settings for the charging station are configured here: Managing the authorization function (see 5.1.1 Authorization modes); synchronizing the time of the charging station with the time of the browser (the charging station restarts after a time synchronization); activating and deactivating the USB stick functions; deleting the event log (log file).

#### **Network Connection**

The network communication can be selected and configured here.

#### **Certificates**

For an encrypted connection, certificates can be imported in  $\star.pfx$  format. The connection to the web interface, OCPP backend and charging station can be encrypted. The following certificates are available:

#### **OCPP** certificates

Certificate	Purpose
Charge point certificate	Encrypted connection to the OCPP server
Central system root certificate	Certificate for logging in to the charging station at the OCPP backend (OCPP 1.6 JSON Security)
OCPP server certificate	Encrypted connection to the charging station
Manufacturer root certificate	Check of the signature for firmware updates (OCPP 1.6 JSON Security)

#### **WLAN Access Point**

The WLAN access point can be configured here and enabled or disabled as required.

EV Charger Web interface

#### **Proxy**

All the necessary configurations for using a proxy server can be found in this part.

#### **OCPP**

All the necessary configurations for connecting to an OCPP backend can be found in this part. The displayed configuration options vary depending on the selected transmission type (SOAP or JSON).

#### **External TCP Meter**

Here, a setting is configured for whether the measured values are read out from external meters in order to dynamically adapt the charging current. All necessary configurations for the external meter can be specified in this area.

#### **Display Text**

Here, you can make settings for the text that is shown on the display describing various processes of the charging station. The language of the text can be changed, the display duration can be configured and the display text itself can be changed.

The text display is limited to 20 characters, and no umlauts or special characters can be used.

The abbreviations "Wh" and "kWh" must not be used in the display texts as they may be misleading to the user. These abbreviations are reserved for indicating transmitted energy. If either "Wh" or "kWh" are entered as display text anyway, this text is ignored and not shown on the display.

#### 4.2 User menu

The user menu contains important information and settings for the user. It is divided into the following areas:

- Help
- Licenses
- User settings
- Logout

#### **User settings**

In this area, changes to the following user settings can be made:

#### Username and password

The web interface username and the corresponding password can be changed here. The following rules apply for assigning the password:

At least 10 characters long

Web interface EV Charger

- Maximum of 2 successive identical characters
- At least 3 of the following criteria are fulfilled:
  - 1 uppercase letter (A-Z)
  - 1 lowercase letter (a-z)
  - 1 number (0-9)
  - 1 special character

#### Language of the graphic user interface

The language of the graphic user interface can be changed here.

#### Remote service interface

The remote access to the charging station can be enabled here. This enables a service technician to access the charging station via an encrypted connection. These settings can also be configured on the OCPP backend.

#### Log level

For error diagnosis, it can be necessary to record the operations of the charging station in detail. This can be enabled in this area of the DEBUG mode. To ensure that the recorded data quantity is not too large, the duration for the detailed recording must also be specified.

#### Recovery key

If you forget the web interface password, you can reset it using the displayed recovery key. The recovery key can also be found on the configuration label.

#### Information

The recovery key absolutely must be kept in a safe place for the entire life of the product!

EV Charger Functions

#### 5 Functions

The following chapters describe special functions of the charging station.

#### 5.1 RFID authorization

Certain device variants are equipped with an RFID reader, which enables the authorization of a charging process with RFID cards in accordance with ISO 14443 and ISO 15693. The RFID authorization only allows a charging session to be started if an identification takes place by means of an RFID card. The authorization function is enabled and disabled in the web interface of the master charging station.

In the case of a local charging network without a higher-level OCPP backend, all RFID cards must be taught in at the master charging station. Up to 1000 RFID cards can be stored. After teaching in, the permitted RFID cards are stored at the master charging station and are managed by the latter in the charging network. It is not possible to teach in RFID cards at a client charging station.

When connecting to an external OCPP backend, all RFID cards must be taught in at the OCPP backend. Any number of RFID cards can be stored. It is not possible to teach in the RFID cards directly at a charging station. The first 1000 RFID cards are relayed from the OCPP backend to the master charging station where they are stored locally. This enables charging sessions to be authorized even if the connection fails temporarily. In case of a connection failure, authorization requests, depending on the authorization mode, are compared to the locally stored RFID cards.

#### 5.1.1 Authorization modes

The authorization modes described below are available in the web interface if the authorization function has been activated.

#### Online authorization mode

This defines which storage location an authorization request is to be compared to.

Mode	Description
FirstLocal	The authorization request is first compared to the locally stored RFID cards stored at the charging station. If the RFID card is not stored locally and a OCPP backend is used, a comparison takes place with the RFID cards stored at the OCPP backend.  If no OCPP backend is used, this setting must be used for an authorization to be active.
FirstOnline	The authorization request is always compared to the RFID cards stored on the OCPP backend. There is no comparison to the locally stored RFID cards stored at the charging station.
OnlyLocal	The authorization request is always compared to the RFID cards stored locally at the charging station. No comparison is made to the RFID cards stored at the OCPP backend.

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#### Offline authorization mode

This defines how an authorization request is handled if the connection to the higher-level OCPP backend fails.

Mode	Description
OfflineLocalUnknown Authorization	All RFID cards are accepted, even if they are not stored locally at the charging station. Only those RFID cards that are stored locally at the charging station and have a status other than "ACCEPTED" are rejected.
OfflineLocalAuthorization	Only RFID cards stored locally at the charging station with the status of "ACCEPTED" are accepted.
OfflineNoAuthorization	All RFID cards are temporarily accepted. As soon as the connection to the OCPP backend exists again, the RFID card is checked and, if an invalid RFID card is being used, the charging process is canceled.
OfflineNoCharging	Charging is not possible in case of a connection failure.
OfflineFreeCharging	In offline mode, authorization is deactivated.

#### 5.1.2 Displays and signals

During RFID authorization, the charging station can display different light patterns on the LED bar and emit acoustic signals.

#### **LED** bar

Display	Description		
Flashing green (every 3 seconds)	Authorization is done correctly.		
Flashing blue (every 3 seconds)	The charging station is waiting for authorization to enable a charging process. Authorization necessary, either with RFID card or by an external input.		
Illuminated orange (once)	The RFID card is invalid.		

#### **Acoustic signals**

Signal	Description		
Single tone	RFID card has been read.		
Rising tone sequence	RFID card has been accepted.		
Falling tone sequence	RFID card has been rejected (no authorization).		

The charging station can also display a text concerning the RFID authorization, e.g. "accepted card". This text can be customized via the web interface.

#### 5.1.3 RFID authorization without OCPP backend connection

The following options are available for managing RFID cards:

- At the RFID reader of the charging station
- In the web interface

EV Charger Functions

#### Managing RFID cards at the RFID reader

Both the master RFID card and all client RFID cards can be taught in directly at the RFID reader of the charging station. To teach in an RFID card, no charging session may be active and no vehicle may be plugged into the charging station.

#### Teaching in a master RFID card

To access the "Service button", the housing cover and the connection panel cover must be removed.

- Press and hold the "Service button" in the connection panel until the second signal tone is sounded (approx. 10s).
   The charging station will then automatically perform a restart, deleting all previously taught-in RFID cards, if necessary.
- 2) The charging station will be available again after 30 seconds.
- 3) After the waiting time, the first three segments of the led bar are illuminated. A master RFID card can be taught in for 30 seconds by holding it in front of the RFID reader.
  - A successful teach-in process is confirmed by a rising tone sequence.

#### Teaching in a client RFID card

- 1) Hold the master RFID card in front of the RFID reader and wait for the rising tone sequence.
- 2) Then hold the client RFID card to be programmed in front of the RFID reader within 10 seconds and wait for the signal tone.
- 3) Confirm the teach-in process by holding up the master RFID card again within 5 seconds.
  - A successful teach-in process is confirmed by a rising tone sequence.

#### Managing RFID cards in the web interface

RFID cards can be managed via the configuration in the web interface. The following functions are available:

- Teaching-in, editing or deleting an RFID card
- Exporting or importing a list of stored RFID cards as \*.csv file

#### Information

It is recommended to use a text editor for editing the \*.csv file. Otherwise the date can be interpreted incorrectly upon import.

The following entries can be made during teaching-in and editing of an RFID card:

Entry	Description		
RFID Card – Serial No. (UID)	Serial number (UID) of the RFID card.		
Expiry Date	Date up to which the RFID card is to be valid.		

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Entry	Description			
Master RFID Card	Set the RFID card as master RFID card. Only one card can be defined as master RFID card.			
Status	Authorization of the RFID card. Here it is also possible to block an RFID card and thus prevent charging with the relevant RFID card.			
Charging Station – Serial No.	Serial number of the charging station where the RFID card may be authorized. All or only certain charging stations in the charg- ing network can be enabled for the RFID card.			

#### 5.1.4 RFID authorization with OCPP backend connection

If the charging station or a charging network is controlled by an OCPP backend, please note the following:

- Teach in RFID cards:
   All RFID cards must be "centrally taught in" at the OCPP backend.
- "Authorization" in the web interface to "ON":
   Each authorization request is relayed to the OCPP backend.
- "Authorization" in the web interface to "OFF":
   A charging process can only be started without holding up an RFID card if the predefined token set in the configuration is recognized and accepted by the OCPP backend.

#### Information

For information on the functionality and the required settings of the OCPP backend, refer to the specific manual of the system used.

#### 5.1.5 Start charging process with RFID authorization

To start a charging process with RFID authorization, proceed as follows:

- 1) Plug the vehicle into the charging station.
- 2) Hold the RFID card, which was previously taught in, in front of the RFID reader.
- 3) The rising tone sequence and the green flashing LED bar indicate that the RFID card has been accepted. The charging process can now be started by the vehicle.
- 4) If necessary, the charging process can be stopped prematurely by holding the same RFID card in front of the RFID reader again.

EV Charger Functions

#### Information

#### Enable input X1

For special device variants, the enabling of a charging session can also be controlled via the enable input X1 (for connecting external components such as a timer, photovoltaic system or home control). If this function has been activated in the DIP switch settings, enabling a charging session will additionally require a correct signal on the enable input X1. Further information can be found in the "Installation Manual".

Maintenance EV Charger

#### 6 Maintenance

#### 6.1 Diagnosis and troubleshooting

The FAQs on our website help to rectify possible errors that might occur: www.solaredge.com/resource-library

#### 6.2 Software update

It is recommended to always keep the charging station up-to-date, as it contains functional enhancements and bug fixes. A software update is available on our website:

www.solaredge.com/resource-library

The information and instructions for the current software package from the associated release notes must also be observed.

A software update may only be performed if no vehicle is plugged in at the charging station.

#### Information

The software update can take up to an hour. The update process is indicated by a slow orange flashing of the LED bar.

After the software update, the charging station restarts automatically. The LED bar will flash blue or green, depending on the authorization setting.

#### Information

The power supply must not be interrupted during the software update. Otherwise, the software update is not terminated correctly and further normal operation of the charging station is no longer guaranteed.

#### Software update at charging network

A software update for a charging network must be performed at the master charging station (EV-Charger x-series). The master charging station relays the new firmware to the connected client charging stations (c-series) via the software update.

EV Charger Maintenance

#### 6.2.1 Software update via web interface



Fig. 6-4: Web interface software update

To perform a software update via the web interface, proceed as follows:

- 1) Download the current software for the charging station (\*.keb file).
- 2) Log into the web interface of the charging station.
- 3) In the main menu under "System" select the item "Software Update".
- 4) Upload the current software using the "Choose a file ..." button.
- 5) Start the update process with the "Upload & Install" button.

#### 6.2.2 Software update via USB stick

For a software update via USB stick, this feature must be activated in the configuration (web interface).

To perform a software update via a USB stick, proceed as follows:

- 1) Download the current software for the charging station (\*.keb file).
- 2) Plug the USB stick into a PC.
- 3) Format the USB stick with FAT32.
- 4) Create a new directory on the USB stick with the name "UPD".
- 5) Copy the downloaded \*.keb file into the "UPD" directory.
- 6) Connect the USB stick to the USB interface of the charging station. The update starts automatically.

#### 6.2.3 Software update via OCPP backend

The software update for the entire charging network can be performed via the OCPP backend. Maintenance EV Charger

To perform the software update an FTP link is required. The information downloaded from our website along with the software update contains the FTP link.

For details on using the FTP link, see the OCPP backend manual.

EV Charger Support

#### 7 Support

If you have technical problems concerning SolarEdge products, please contact us:

https://www.solaredge.com/service/support

Before contact, make sure to have the following information at hand:

- Model and serial number of the product in question.
- The error indicated on the product SetApp mobile application or on the monitoring platform or by the LEDs, if there is such an indication.
- System configuration information, including the type and number of modules connected and the number and length of strings.
- The communication method to the SolarEdge server, if the site is connected.
- The product's software version as it appears in the status screen.

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