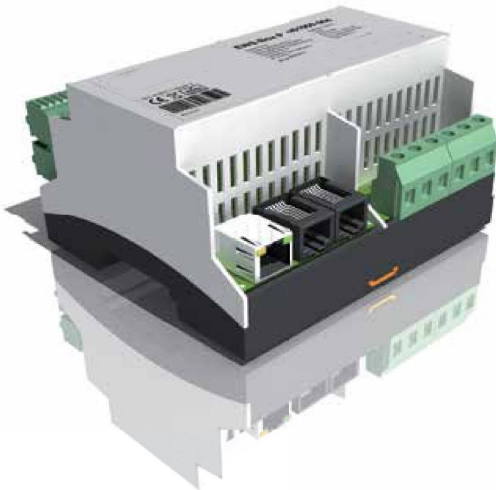# P-CHARGE EWS-Box

## Control unit for electric charging stations

1. Introduction

The EWS Box communication module undertakes all control- and signaling functions necessary for the connection of an electric vehicle (EV) to a cable-linked supply unit, in accordance with IEC 61851 Mode 3. Parameters for a self-sufficient or for a systems-integrated operation can be configured via HTML pages.

2. Configuration of the LAN connection

To set up the EWS Box with firmware a new LAN connection must be created. Open the Control Panel via the operating system *"Start"*-button and select menu item *"Network and Sharing Centre"*. Select menu 🖳 LAN-Verbindung aus.
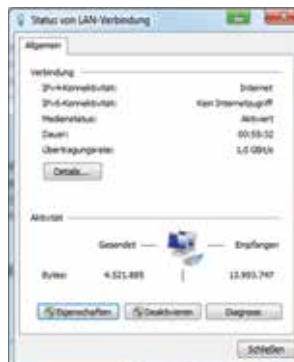
This window opens when the button *"Settings"* is pressed.

Select *"Version 4(TCP/IPv4)"* in the following window by double-clicking on *"Internetprotocol"*.

In this window you must now change the default IP address *192.168.0.2* and the subnet mask *255.255.255.0* and confirm all with *"OK"*. Please ensure, when deploying several EWS boxes (networked to one server) that each has a fixed IP address.

2.1 Configuration with EWS firmware (HTML)

Once the default IP address has been entered (192.168.0.1), the Start Page is called up in the navigation bar. When operational the respective status of both charging points is displayed.
A password is not required for login at Factory Setting. A password can be generated under the menu item Installation.

CHARGING POINT: The energy consumed in the current and previous charging sessions is displayed, alongside the status and total cumulative energy from all charging sessions. The charging time and respective RFID card are also displayed. The charging process can be initiated or terminated by clicking on "Start" or "Stop".
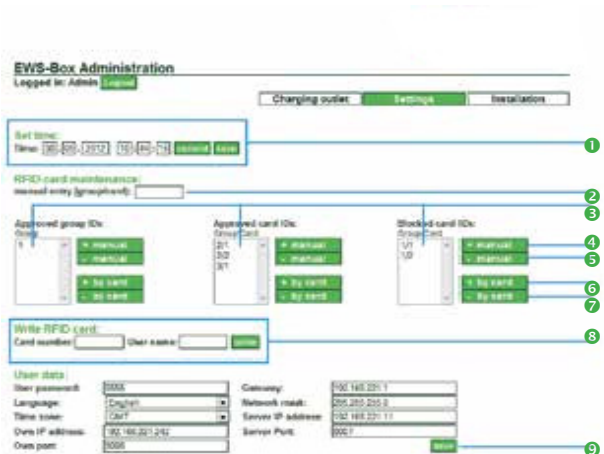
3. Settings

Under Settings, details such as date, time and user data can be generated. In RFID card administration, card IDs and group IDs can be generated. Each card can then be programmed and configured in conjunction with its associated RFID card reader. The blocking of invalid cards is also possible here.
Several EWS Boxes can be administered on the network by entering user data and the corresponding server settings on the customer-side.

❶ Set Date and Time
❷ Text field "manual entry"
❸ Approved / blocked IDs
❹ Enter manually
❺ Removed manually
❻ Enter via card
❼ Remove via card
❽ Write RFID card
❾ Save card settings

There are two ways of registering RFID card IDs on the website. You must be logged in as a user or as Admin.

3.1 The administration of RFID-cards

Each RFID card can be allocated to a group and has a specific card number. The ID consists of a group number and a card number (Group/Card).
Example: Card 10/2 - refers here to group 10, card number 2.
Complete groups and also individual card numbers can be authorized. If, for example, a "1" is saved in the Group IDs, then all cards listed in Group 1 are authorized. If, for example, card "2/1" is saved in the authorized Card IDs, then only card number 1 from Group 2 is authorized along with all cards in Group 1. If you wish to block a card, this must be entered in Blocked Card IDs.

There are two ways of entering RFID card IDs on the website. You must be logged in as a user or as Admin.

3.1.1 Manual entry

In the text field "manual entry (Group/Card)" key in the group number or group and card numbers as outlined.

With one mouse-click on the `+ manual` button, the card is written to the appropriate box (authorized group IDs, authorized card IDs or blocked card IDs). The recorded card ID can also be deleted via the `- manual` button. To confirm the entered card IDs, press the button `save` - bottom right.

3.1.2 Scanning and configuring

Individual RFID cards can be configured via the button `+ by card`. The card must be held to the card reader. Wait approx. 3 seconds then press the `+ by card` button to authorize the RFID card. Once successfully added, this RFID card appears in the authorized card IDs box.

A selected card ID can be deleted here by pressing the button `- by card`. To confirm the entered card IDs, press the button `save` - bottom right.

3.1.3 Configure RFID cards

RFID cards can be configured using a corresponding RFID reader-programming device. Here a card number (e.g.: "10/2") and a username (max. 8 digits) can be entered. This information can then be written to the RFID card by pressing the button `write`. If the card has an approved ID it can be used immediately to initiate a charging process.

4. Installation

Required settings relating to the plug and cable systems from the respective manufacturers can be entered here. A meter can be used across an S0 interface for determining the kWh output. Once Impulse/kWh setting has been configured, these values can then be interpreted via the EWS Box. Similarly, maximum charge, previously defined via the jumper, can be further limited according to customer requirements.

Software settings and system parameters can be configured in the Installations menu. The Software Information displays data relating to the software version, serial number and power or jumper settings. You can also see if your EWS Box is linked to a power-backup circuit board (is indicated by "Ready")

Directly below the Software Information is the tool for importing or exporting a configuration.

EWS Box Administration As of 08/2016

The required configuration is exported by clicking on *"Download"*. The new configuration can now be saved to your PC.

An options window is opened by clicking the *"Browse"* button. Here any previously exported configuration settings can be selected and imported via the *"upload"* button.

YOU ALSO HAVE THE OPTION TO LOAD NEW FIRMWARE UPDATES:

Again the requested firmware can be selected via the *"Browse"* button and uploaded by pressing the *"Upload"* button.

You can find the most up-to-date version of the firmware in the Download area under www.SSL-Energie.de

4.1 Set system parameters

System parameters can be set using the options on the right. These can only be modified if you are already logged on as Admin.

ADMIN PASSWORD: Here you can set a 12-digit Admin password (no password is assigned in the factory setting).

CHARGING PORTS: Using the drop-down menu you can specify whether one or two charging points should be supplied with the EWS Box.

ACTIVE ENERGY METER: To ensure accurate energy metering, the correct number of pulses per kWh must be entered here if a meter with SO-interface is available.

SYSTEM MODE: You can choose between the following settings via a drop-down menu:

- Standalone: self-sufficient control and monitoring of the charging points with no request for authorization.
- Standalone/RFID self-sufficient control and monitoring of charging points with authorization using Mifare RFID cards
- Ethernet: On-grid control and monitoring of the charging points with no request for authorization.
- Ethernet/RFID: On-grid control and monitoring of charging points with authorization using Mifare RFID cards

SECURITY LOCKING: The type of locking device required can be selected via a drop-down menu. The locking device type or feedback signal type can be set here according to manufacturer or manufacturer program.

VENTILATION (BUILDING): Here you can choose between installed ventilation and non-installed ventilation. Mechanically operated building ventilation must be activated when charging vehicles with gassing batteries.

CABLE MODE:

- Plug-in: with EVSE with a panel-mounted socket-outlet
- Equipped: with integrated EVSE with an inbuilt charging-cable connection.

MAXIMUM CURRENT (A) Here the maximum charge, previously defined via the jumper, can be further limited according to customer requirements. This setting can, for example, serve to protect the existing electric installation.

POWERFAIL:

- Automatic restart: charging process is automatically re-initiated following a power outage and subsequent re-establishment of the supply voltage.
- Manual restart: in the event of a power outage the charging process is interrupted and is not automatically re-initiated following re-establishment of the supply voltage. The charging process continues only after manual reactivation by the user.

RFID-PIN: Here you can input a 4-digit RFID card pin. Only RFID cards which are programmed with the same PIN can activate a charging process.

The remaining fields can be used for the input of personal data.
Once you have completed all changes, then save with button **save** .

NOTE: Installation, startup and maintenance operations should be performed exclusively by expert personnel. Charging processes which use a gassing battery but with inadequate ventilation can lead to a build-up of hydrogen gas. In such cases there is a risk of explosion!

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DOWNLOADS: (Operating instructions / the Quick Guide to Operations / Firmware) under: https://www.ssl-energie.de/service/downloads/