

Manual: QA Wallbox Solax EVC X3

Communication and control interface for the Solax EV Charger EVC X3 wallbox.

Introduction

QA Wallbox Solax EVC X3 communicates with and controls the Solax EV Charger EVC X3 charging station (wallbox). It reads the operating and status values of the wallbox and allows direct manual control of the charging modes and charging power.

The application can be used on its own as a monitoring and control interface, or it can be integrated into the energy management of the house — for charging from photovoltaic surplus or for spot price control. The application itself contains no automation logic; it serves as a data and control interface for higher-level applications.

For clear visualisation and access to measurement history and graphs, we recommend connecting to Mervis SCADA.

Upstream and downstream applications

Upstream applications

The application also works on its own. For automatic charging control, it can be controlled by one of the following applications.

Optional:

- **QA Consumption Control** — charging control according to the photovoltaic surplus (energy management of the house).
- **QA Spot Pro** — spot price control of charging (in combination with QA Wallbox SPOT Planner).
- **QA Wallbox SPOT Planner** — planning and control of charging according to spot prices and PV surplus.
- **QA HDO** — passes the TOU (HDO) signal so that the application can respond to the low/high tariff.

Downstream applications

In terms of control, the application is the last link in the chain — it is itself the communication and control interface to the Solax EVC X3 wallbox (via an RS485 line and a converter to Modbus TCP) and has no downstream QA application.

Installation and initial setup of the QA

Installation

Purchase the application in the Smart Home and Energy e-shop (<https://eshop.smarthomeenergy.cz>). After the purchase you receive an e-mail with a link to the activation form, in which you choose one of the two installation methods:

- **Installation via the SHE Installation Application (recommended)** — the application is installed into the unit automatically and allows future automatic updates. Requires the "superuser" credentials for the unit. See the separate "Installation Application" manual for details.
- **Standalone installation file (*.fqax)** — install the file manually into the unit according to the unit manufacturer's instructions (logged in as "superuser"). This option does not allow automatic updates.

You can try out the functions of the application before purchase in the trial version — the TRIAL unlocks full functionality for 2 days.

After a successful installation, the following appear in the Electromobility section:

- a set of application cards (tiles): **Wallbox EV Charger, Values overview, Options Settings, Manual control and Installation**,
- quick control tiles (**ONCE-FULL, AUTO, MAN-FULL, ONCE, MAN-ON, MAN-STAGE, MAN-OFF**),
- value tiles (**Output, EV Connected, TOU, Max Current, Total, L1, L2, L3, Period, Hour and Today**).

Operating prerequisites

- **Controller:** Fibaro HC3 or HC3L (or Yubii Home / Home Pro).
- **Wallbox connection:** via an RS485 line and an RS485 → Modbus TCP converter (e.g. Elfin EE11A / EW11A or Protoss PE11-M / PW11-M).
- The RS485 → Modbus TCP converter must be in the same network as the HC controller and have a known IP address; the Unit ID address is set in the wallbox.

Opening the application control card

To open the application card in a web browser, move the cursor over the tile (e.g. **Wallbox EV Charger, Manual control**) and click the **eye** icon in the top-right corner of the tile.

Warning: Not all cards and tiles are displayed to all users. Each user selects which cards and tiles are displayed on the Display Settings card (sheViewControl application) – levels SHORT, ADVANCED and ADMIN. If you cannot see a described card, check the settings on this card.

User settings

Initial setup procedure

1. **Installation** card — set the communication with the wallbox (IP address, Unit ID) and the configuration of currents, times and control.
2. **Options Settings** card — set the notifications about the charging state.
3. **Wallbox EV Charger** and **Manual control** cards — routine everyday charging control.
4. **Values overview** card — check the operating and energy values.

Installation card

Used for the initial setup of the communication with the wallbox and the control parameters.

 **Warning:** When saving settings, always wait until Run status changes to Running. Do not press SAVE before that.

Current configuration

- **Charging Current Minimum** and **Charging Current Maximum** — range of the wallbox charging current.

Time configuration

Delays in the control response: **Power On Delay**, **Shutdown delay**, **Delay Increase**, **Delay reduction**, **Turn on the minimum** and **Minimum shutdown**. The values determine how fast and how often the control may change the charging state and power.

Control configuration

- **Wallbox Group** — group number through which the application cooperates with higher-level QA applications (e.g. spot price control or control according to surplus). Applications with the same group number form one logical unit.
- **CONTROL CONFIGURATION / Wallbox Control** — selection of the wallbox control method.

Control Inputs

Overview of the higher-level applications that control the charging of the wallbox (e.g. QA Wallbox SPOT Planner).

Input/output configuration

- **TOU SOURCE TYPE** — selection of the TOU (HDO) signal source (Disabled by default).

Communication settings

- **Unit ID** — address of the wallbox on the Modbus bus.
- **IP Address** and **MAC Address** — network identification of the converter.
- **MAC ADDRESS / Select** — selection of the converter from the list of devices found.
- **SEARCH NETWORK** — searches the network for available converters.

The **Run status** line shows the running state of the application. Save the settings with the **SAVE** button.

EMS output devices

Values for cooperation with the energy management: **EMS Priority**, **Output device phase** and **Overview EMS devices**.

The application version is shown at the bottom of the card (e.g. sheSolaxEvCharger 1.02.01).

Wallbox EV Charger card

The main control card — shows the charging state and allows quick manual control.

Status values: **Status**, **Connection**, **Fully charged**, **Cable lock**, **Charging Power Total**, **Charging Time**, **TOU**.

The **External control mode** section shows the current control state (Active Control, Input Mode, Input, Control Mode, Output).

Control buttons:

- **AUTO** — automatic mode (control by the higher-level application).
- **ONCE-FULL POWER** — one-time charging at full power.
- **MANUAL-FULL POWER** — continuous charging at full power.
- **ONCE, MANUAL-ON, MANUAL-OFF** — one-time or continuous manual switching on/off of charging.

Use the **Manual stage** option (MIN / – / + / MAX buttons) to set the manual charging power.

The **Energy** section provides an overview of consumption: **Power**, **Period**, **Energy Hour**, **Today** and **Total**.

The same control is also available directly from the quick control tiles on the desktop (**AUTO**, **ONCE-FULL**, **MAN-FULL**, **ONCE**, **MAN-ON**, **MAN-OFF**). The **MAN-STAGE** tile contains the **Manual stage** slider (e.g. 1:4.1kW).

Manual control card

Extended manual control of the wallbox and the charging parameters.

The **Managment Mode** section shows the current **Control Mode** (e.g. AUTO-OFF). Use the **MANUAL CONTROL** button to switch to manual control.

The **Wallbox controls** section shows the current values of the modes (Green Mode, Eco mode, Boost mode, Control Mode); switch the mode with the buttons:

- **GREEN** — charging from surplus only.
- **ECO** — economy charging.
- **FAST** — fast charging.
- **STOP** — stopping charging.

Command buttons: **Start charging**, **Stop charging**, **Available**, **Not available**, **Reserve**, **Cancel reservation** — direct control of the wallbox state.

Use the **Minimum current** and **Maximum charging current** buttons (– / – / + / ++) to set the range of the charging current.

- **Enable card activation** (DISABLED / ALLOWED) — enabling of charging authorisation with an RFID card.
- **Charging Start Mode** (IMMEDIATELY / BY CARD) — whether charging starts immediately or only after presenting a card.

Values overview card

Detailed overview of the wallbox operating and energy values.

Table by phases (Phase R, Phase S, Phase T, Total): **Voltage**, **Current**, **Charging**, **External**.

Further: **Total energy**, **Main breaker limit**, **Configure performance**, **Stage configuration**, **Type**, **Charging phase**.

Options Settings card

Setting of notifications about the charging state of the wallbox.

Select the events you want to be informed about: **START** (charging started), **STOP** (charging finished), **INTERR** (charging interrupted), **ERROR** (wallbox error state).

Choose the delivery channel: **E-mail**, **Push** or **TTS** (voice notification).

Use the **Notification period** buttons (-- / - / + / ++) to set the notification frequency.

Select the recipients in the **EMAIL USERS** and **PUSH DEVICE** sections. A user must have valid access to the unit to appear in the drop-down. If an item is missing in the list, click **Update** — the list is loaded again from the unit.

The **Run status** line shows the running state of the application. Save the settings with the **SAVE** button.

Notes

- The **Update** button only reloads the list of available items (users, devices) from the unit. It does not save the configuration.
- For clear visualisation and access to measurement history and graphs, we recommend connecting to Mervis SCADA.