

Brief instructions | 26.02.2024

# ABB-free@home<sup>®</sup>

## How-to charger integration

### Brief instructions

Connection of a wallbox to ABB-free@home<sup>®</sup> with the example of the Terra AC Wallbox



### Description:

How can you connect a wallbox to ABB-free@home<sup>®</sup> and use it?

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## 1.1 Wallboxes to ABB-free@home®

### Introduction:

The connection of wallboxes to ABB-free@home® is made via an add-on. An add-on is an app/a software module that can be selected and installed in the configuration interface of the System Access Point under "Extensions".

Prerequisites:

- A set up ABB-free@home® system with a System Access Point 2.0 (SAP/S.13)
- The System Access Point has the latest Firmware (at least 3.2.4)
- The local API is activated in the System Access Point in the area of settings/ABB-free@home® settings/system
- The installed wallbox supports protocol OCPP 1.6 (JSON)
- The wallbox does not require an Internet connection
- The wallbox has the latest Firmware
- Wallbox and ABB-free@home® are located in the same local network via WLAN or LAN.

### Functions:

After successful coupling, the wallbox can be operated and used in actions via the ABB-free@home® app and from ABB-free@home®. Only the basic functions are supported:

- Activating/deactivating charging
- Display of connecting status to the vehicle
- Limitation of the charging current
- Activating/deactivating free charging

The respective apps of manufacturers may offer a greater range of functions.

Examples:

Applications in connection with the ABB-free@home®:

- Viewing the status of the charging process – e.g. in the app
- Use in actions
  - "If X, then activate charging"
  - "If Y, then deactivate charging"
- Using time programs, e.g. for "Charging" or "Activating free charging"
- Scenes: e.g. during "Activate charging" switching the garden illumination or other participants off.

## 1.2 Wallboxes to ABB-free@home®



### Notice

- Not all manufacturers of wallboxes adhere 100% to the standard OCPP 1.6. That is why an impairment of the function range may occur in individual cases.
- Due to the numerous wallboxes available on the market, Busch-Jaeger does not perform tests of third-party manufacturers. The use of the add-on is non-binding and without guarantee.
- The how-to refers to the connection of an ABB Terra AC Wallbox. The ability to connect, the sequence and the range of functions of the use of other wallboxes can deviate from the example.

### Use/Operation:

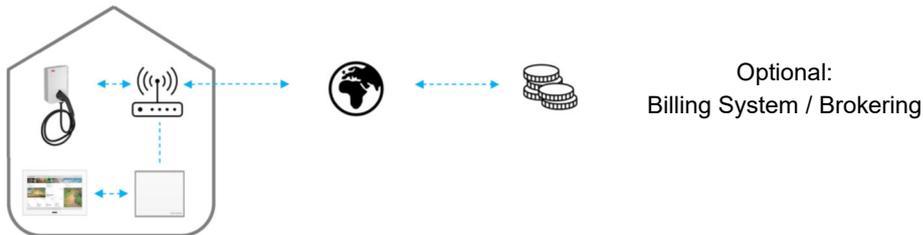
If RFID tags are used for legitimation, the charging process must first be activated via ABB-free@home® and then started via the RFID tag. The deactivation in ABB-free@home® offers additional protection, e.g. at longer absence during holidays.

If the charging process is to take place by ABB-free@home® without RFID tags, the wallbox is to be configured in operating mode "Free charging". Enabling/disabling then takes place from the ABB-free@home®.

### 1.3 Wallboxes to ABB-free@home®

#### Overview:

- Wallbox and ABB-free@home® are located in the same local network via WLAN or LAN. If OCPP brokering is used, an Internet connection is required.



#### OCPP Brokering

The ABB-free@home® system supports the so-called OCPP brokering. This makes the integration into ABB-free@home® possible, also when the wallbox is connected with a backend for accounting purposes. The SysAP then transmits all invoicing-relevant information to the backend.

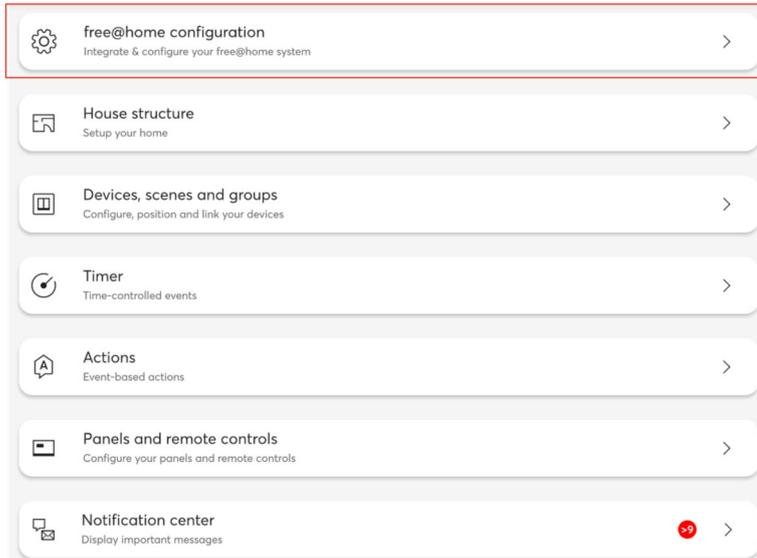
The connection of ABB-free@home® to the wallbox takes place locally and does not require an Internet connection. If OCPP brokering is used, an Internet connection is required.

The local connection to the wallbox can be secured with a password. This must be allocated in the app of the manufacturer and entered in the add-on. The local communication takes place unencrypted. The connection to backend/brokering on the other hand is encrypted.

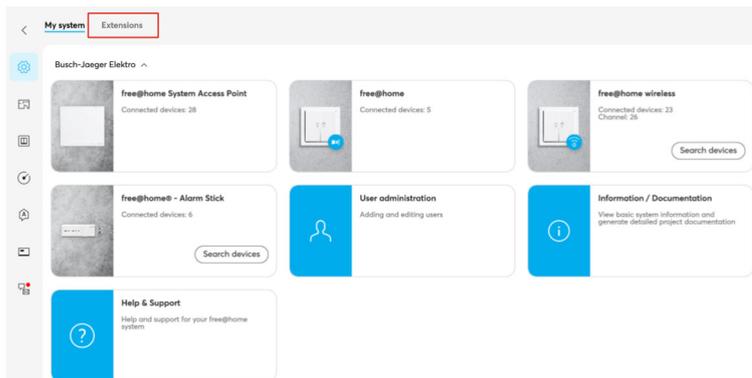
The login data are available at the accounting service:

OCPP Broker	
OCPP Broker URL	<input type="text"/>
OCPP Broker Passwort	<input type="password"/>

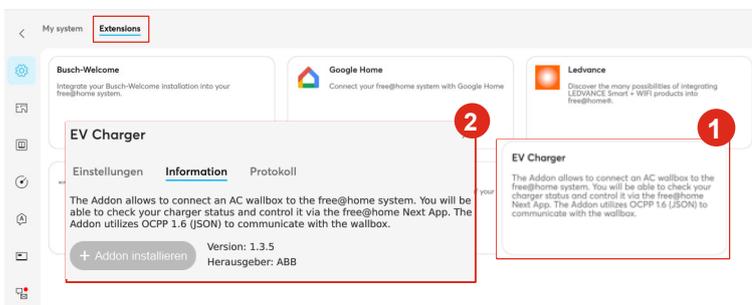
## 1.4 Wallboxes - Installing add-on



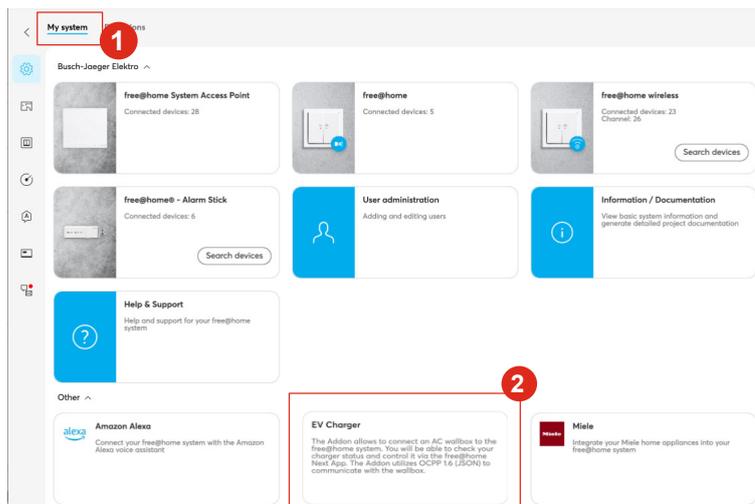
1. Login to the configuration interface and selection of menu item "free@home configuration".



2. Change to the add-on store (Extensions).

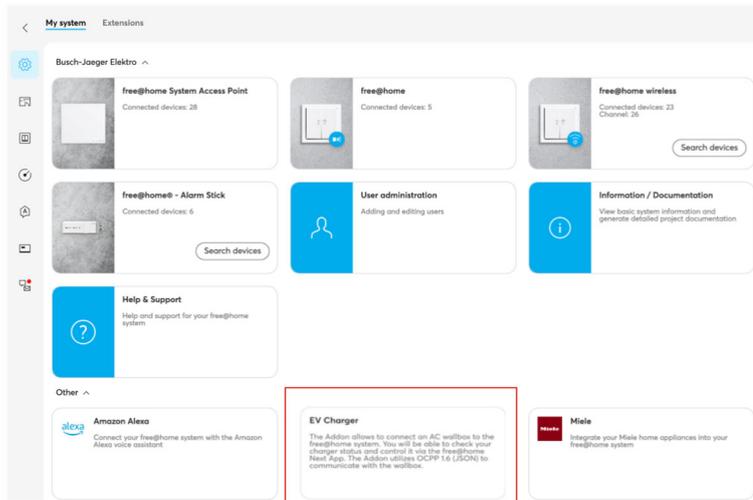


3. Select add-on "EV charger" [1] and install [2]. Exit the pop-up window via "x".

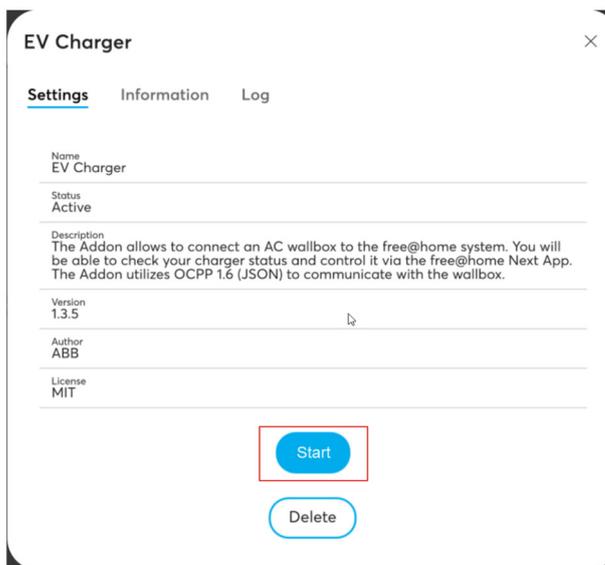


4. After the successful installation, the add-on is displayed in the "My system" area and additional settings can be made.

## 1.5 Wallboxes - Setting up add-on



5. Open the add-on with a "Click" for additional settings.



6. The add-on can be activated/deactivated via "Start". The basic settings are made in the bottom area.

### EV Charger ×

**Settings**   Information   Log

**General**

OCPP Server URL ws://<sysap-ip>:33033

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**Charger settings** 🗑️

Serial number \*  ①

Charger ID ①  ②

Password ①  ③

Maximum charge limit (A) \* ①  ④

Connection state connected ⑤

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**OCPP broker**

OCPP broker

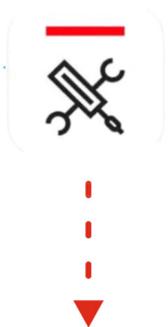
OCPP broker URL  ⑥

OCPP broker password

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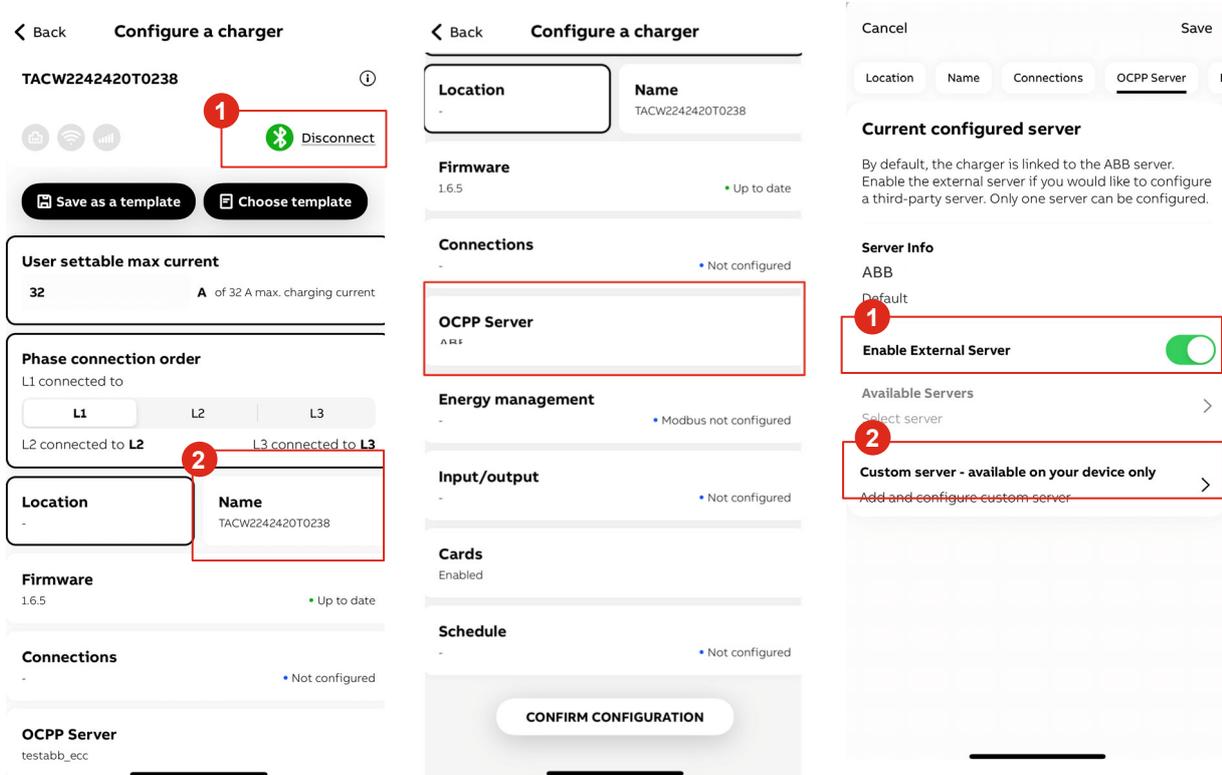
- [1] For serial number/see manufacturer app
- [2] Wallbox ID as offered by the wallbox manufacturer
- [3] Password that was allocated in the OCPP configuration of the wallbox
- [4] Charging limit that was set in the wallbox setup
- [5] Status of connection
- [6] OCPP broker access data to the extent used



Where can you find the above-mentioned details on the example of the Terra AC wallbox/Terra config app

## 1.6 Wallboxes - Setting up add-on

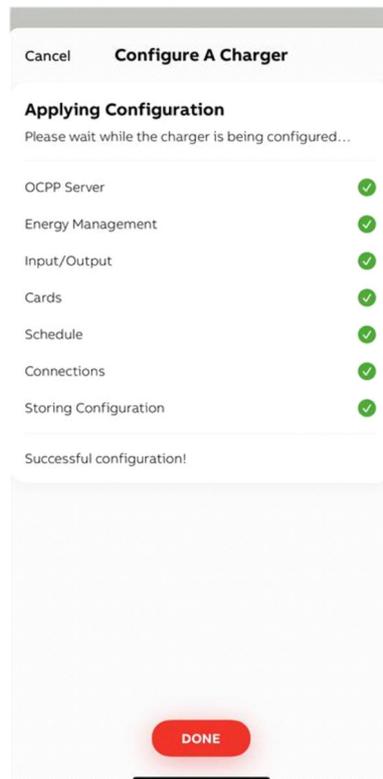
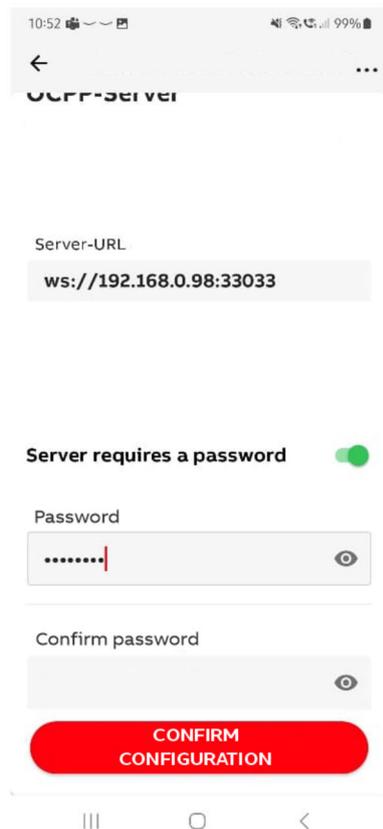
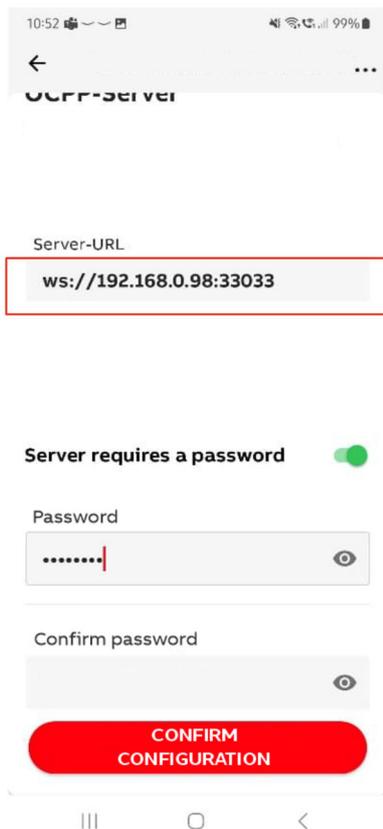
### Example of the Terra AC wallbox/Terra config app



1. Connect with the wallbox [1].  
Transmit name in add-on [2].

2. OCPP server settings.

3. Activate external server [1].  
Select user-defined setting [2].

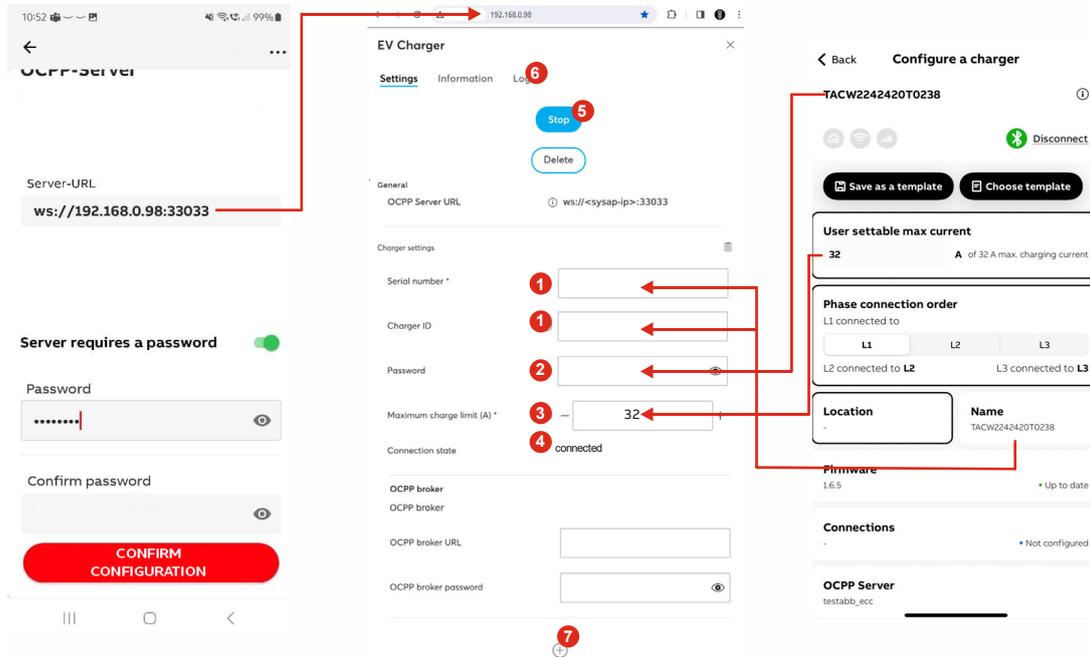


4. Input of server URL (IP address of the System Access Point). In format "ws://xxx.xxx.xxx.xxx:33033".

5. Confirm/apply the configuration.

6. The transmission must take place without an error message.

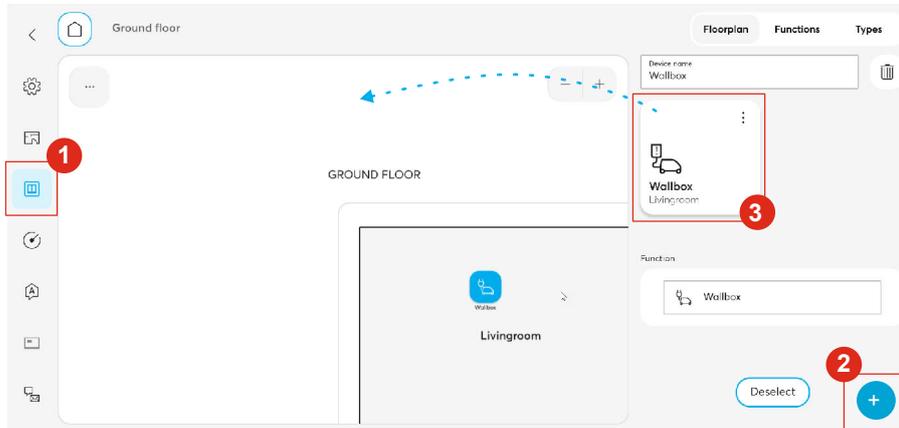
## 1.7 Wallboxes - Setting up add-on Overview



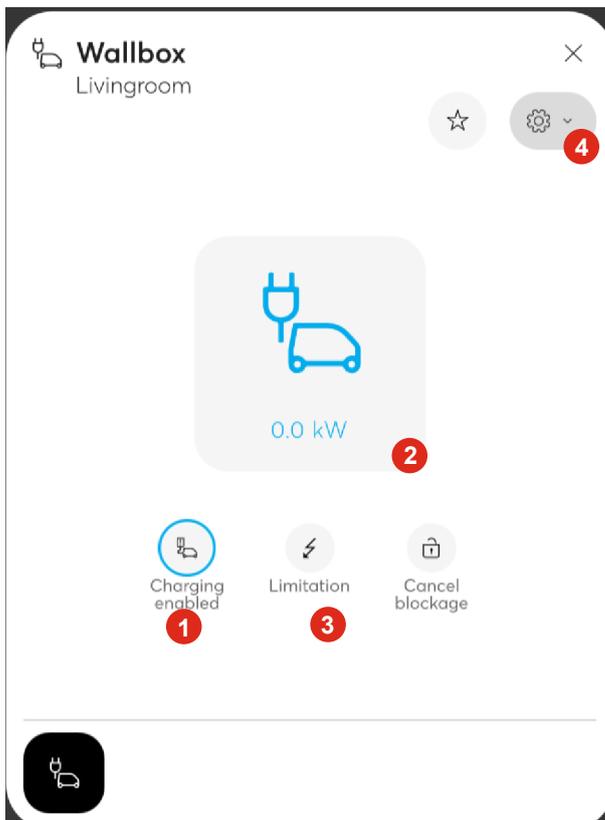
- [1] Serial number/ID from wallbox app
- [2] Password of wallbox app
- [3] Maximum charging current from wallbox configuration
- [4] Status of the connection between wallbox and System Access Point.
- [5] In case of irregularities, check the network connection and, if necessary, stop the connection occasionally and restart it again.
- [6] The exchange of communication between the wallbox and the System Access Point can be viewed in the protocol area.
- [7] Configuration/supplementation of additional wallboxes

## 1.8 Wallbox - Utilisation

After successful coupling, the wallbox can be positioned in the floor plan and used like any other participant.



1. In the area "Devices, scenes and groups" of the configuration interface the wallbox is pulled into the floor plan like any other participant.



2. After being located in the floor plan, the wallbox can be operated via app (charging/activating/deactivating) [1] and the status [2] viewed. In parallel, the charging current [3] can be limited or activated via setting "Free charging" [4].

< Add action ×

Wallbox

Options Live-Modus

Free vending ▼

on

off

Upon

On occurrence of the event

Cancellation of the event

Switching delay [s]

—  +

Save

3. Aside from the basic operation, the wallbox can also be integrated in actions or scenes.



**Notice**

The operation of add-on and RFID are "AND" linked. If RFID tags are used, the charging process must first be activated via ABB-free@home®. If the charging process is to take place by ABB-free@home® without RFID tags, the wallbox is to be configured in operating mode "Free charging". Enabling/disabling then takes place from the ABB-free@home®.



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