SMARTFOX
RS485 / Ethernet Converter

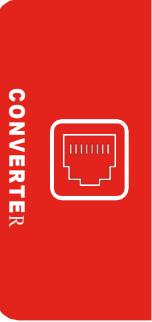**Operating instructions**

Table of contents

Version	Date	Description
V1.0	02.06.2022	Preparation of operating instructions Ethernet Converter

1. Product overview

SMARTFOX RS485 / Ethernet Converter

ℹ The following instructions explain the connection and parameterisation of the SMARTFOX RS485 / Ethernet Converter. The SMARTFOX RS485/Ethernet Converter can be used to control a SMARTFOX Pro Charger via Ethernet (LAN), so that the RS485 interface on the SMARTFOX Pro is available for other functions (e.g. replacement of an energy meter, EGO Smart Heater, reading out inverters, etc).

Required components

OR

- **SMARTFOX Pro / Pro 2 incl.** current **transformer 80A** Software version EM2 00.01.03.18 or higher (Pro) Software version EM3 00.01.03.18 or higher (Pro 2)
  Art. No. 0791732486575
  Art. No. 0767523866383

- **SMARTFOX Pro / Pro 2 incl.** current **transformer 100A** Software version EM2 00.01.03.18 or higher (Pro) Software version EM3 00.01.03.18 or higher (Pro 2) **Art. No. 0791732486698**
  Art. No. 0767523866390

- **SMARTFOX Pro Charger**
  Art. No. 0767523866314

- **SMARTFOX RS485 / Ethernet Converter**
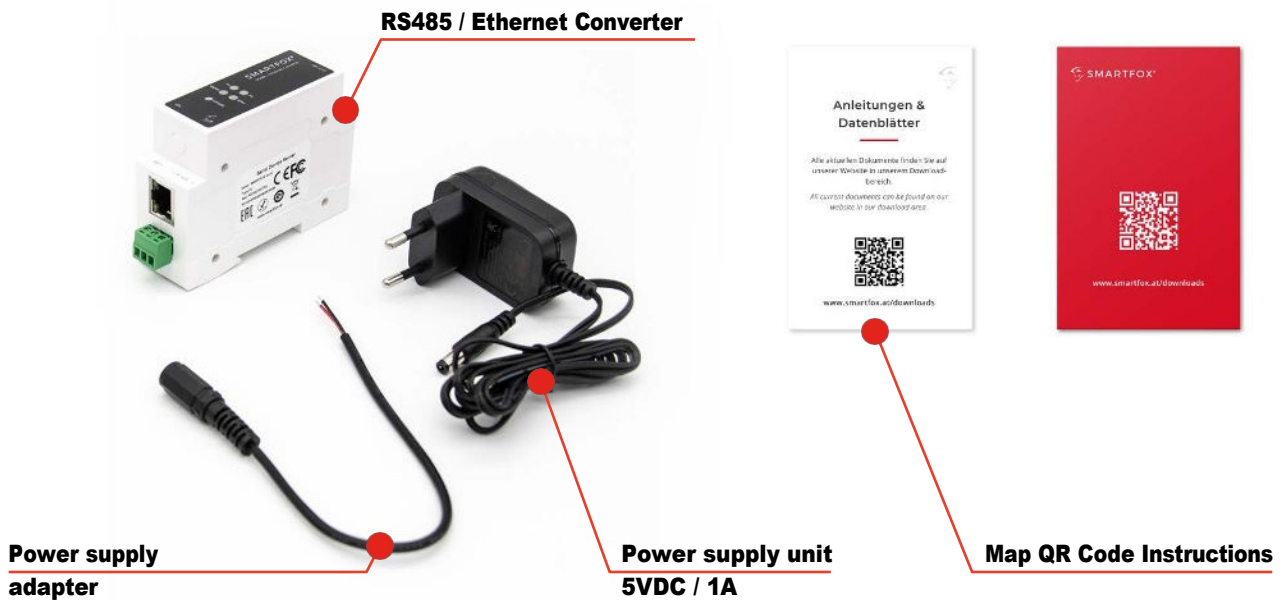 **Art. No. 0767523866413**

NOTE: The converter can only be used for one charging point. Only 1 converter possible per energy manager.

1.1 Technical data

Power supply	5 - 36 VDC
Self-consumption	2-3 W
Network interface	LAN RJ45,10/100Mbps
Network protocol	TCP/IP, U D P , IPV4
IP type	DHCP, static IP
Serial interface	1x RS485 (baud rate 9600bps)
Network caching	Transmit: 6 KB, Receive: 4 KB
Serial caching	Receive: 2Kb
Configuration	via Smartfox Pro
Certificates	CE, RoHS, FCC
Protection class	IP30
Dimensions	H 71mm x W 25mm (1.5 TE) x D 60mm
Weight	200g (with packaging 261g)
Mounting	DIN rail TH-35
Temperature range (in operation)	-40°C to +85°C
Humidity (in operation)	5% - 95% RH
Housing material	Plastic PBT / PC)
Article number	767523866413

1.2 Scope of delivery

RS485 / Ethernet Converter

Power supply adapter

Power supply unit 5VDC / 1A

Map QR Code Instructions

2. Assembly

Remove the SMARTFOX RS485 / Ethernet Converter from the packaging. Mount the converter on a standard 35mm DIN rail, in a protected area (e.g. electrical distribution board). Space requirement: 1.5TE (pitch units).

⚠️ **CAUTION: Improper installation / electrical connection may result in damage and danger to persons and objects. The work may only be carried out** by **a qualified electrician.**
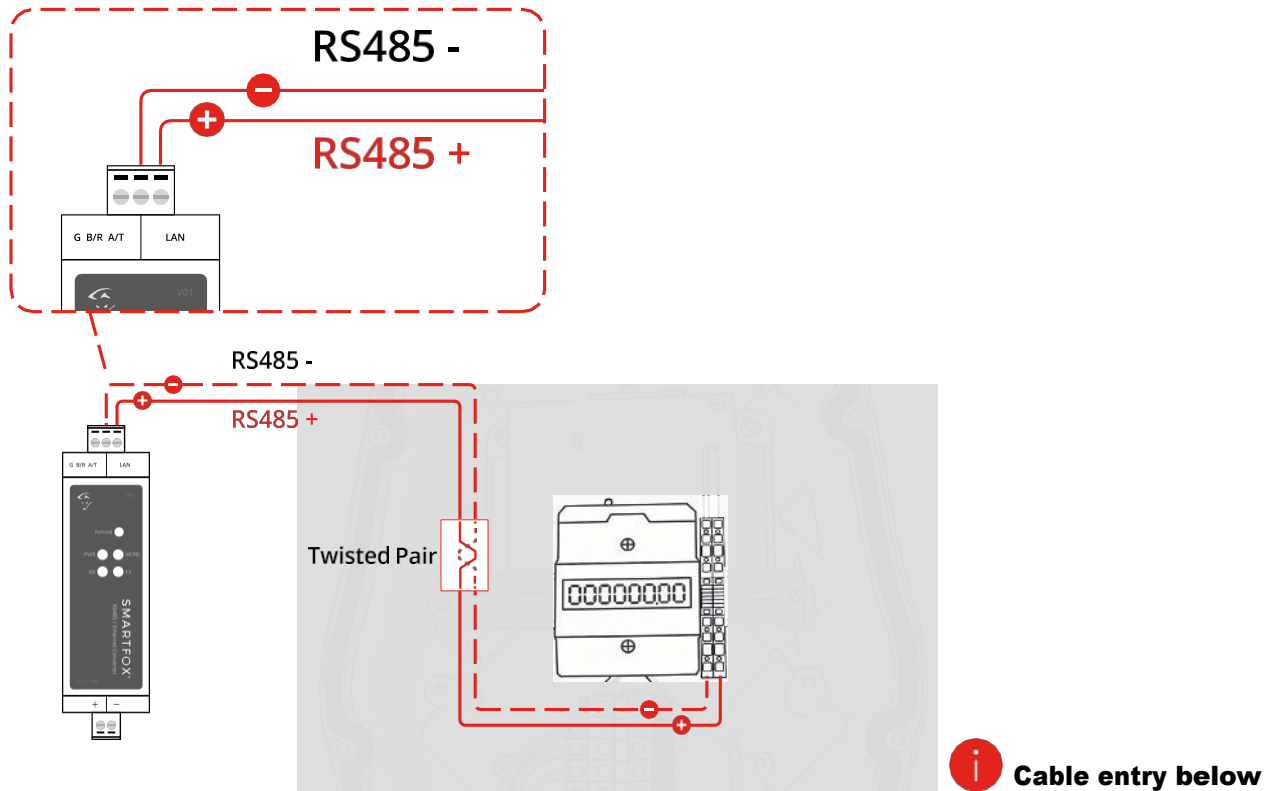
3. Connection

3.1 Network connection

Plug the RJ45 connector of a LAN cable into the socket provided on the top of the unit.
The second plug of the LAN cable is connected to a free port of the router/switch.

NOTE: The SMARTFOX RS485 / Ethernet Converter and SMARTFOX Pro must be on the same network. The Function with interconnected power line adapters or WLAN extenders cannot be guaranteed.

SMARTFOX PRO — WLAN / LAN — ROUTER — LAN — RS485 / ETHERNET CONVERTER — RS485 — SF PRO CHARGER

**LAN cable**
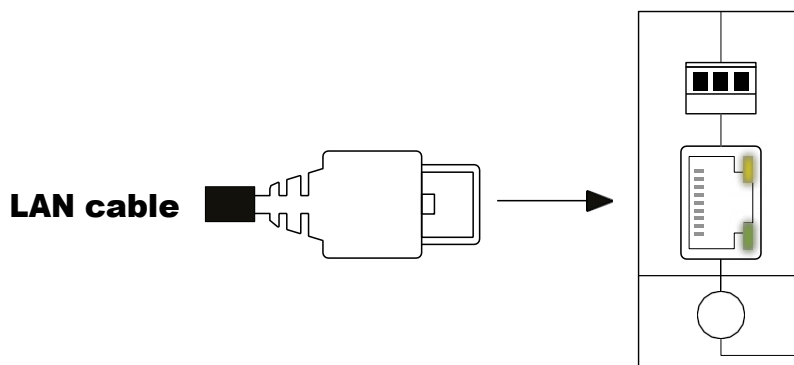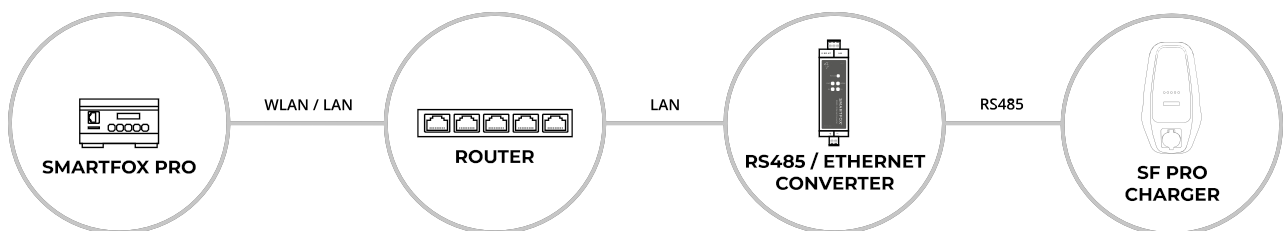
3.2 RS485 connection

Connect the corresponding terminals of the RS485 terminal of the converter to the RS485 terminal of the SMARTFOX Pro Charger. Use a twisted pair of wires of a shielded cable (e.g. CAT5).
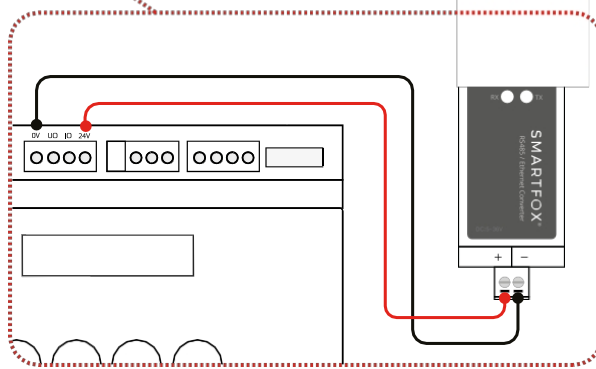
RS485 -

RS485 +

G B/R A/T   LAN

V01

RS485 -

RS485 +

G B/R A/T   LAN

Twisted Pair

00000,00

(i) Cable entry below

3.3 Power supply

The power supply of the converter can be in the range of 5-36VDC. Pay attention to the connection to the correct polarity.
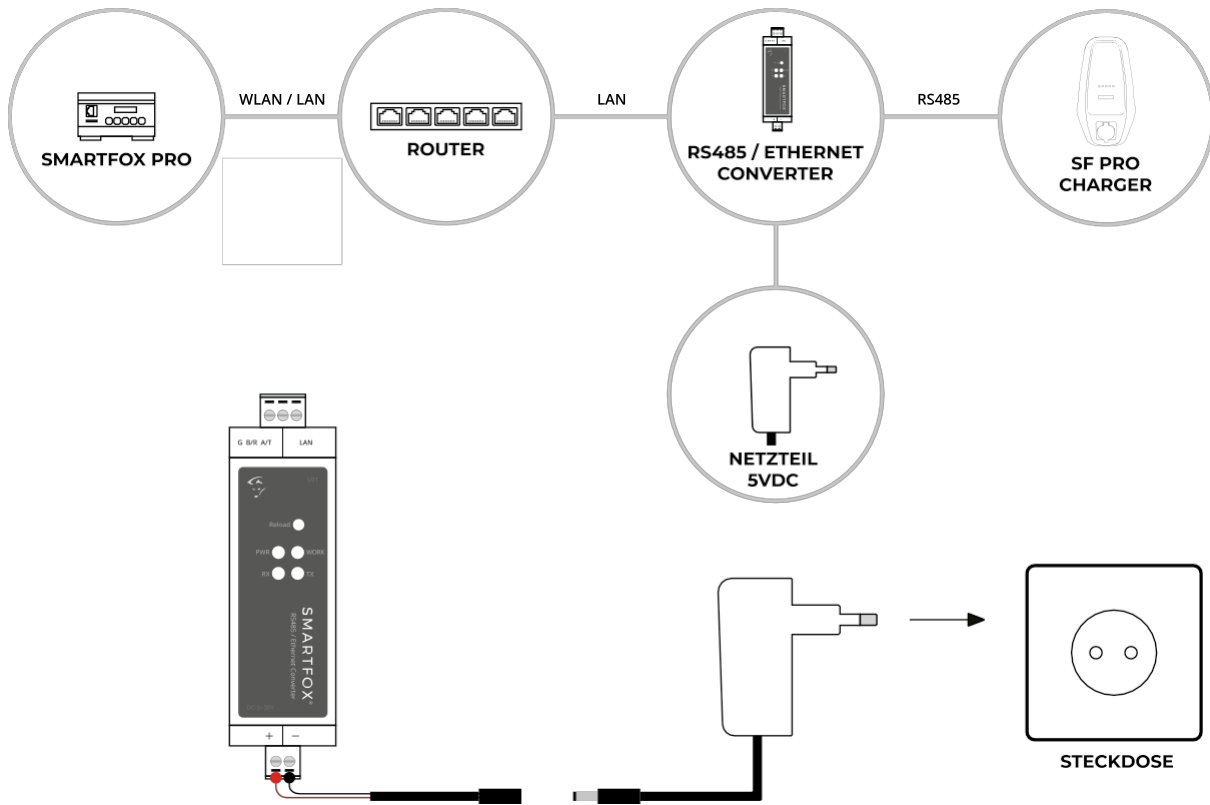
3.3.1 Power supply via SMARTFOX Pro

SMARTFOX PRO — WLAN / LAN — ROUTER — LAN — RS485 / ETHERNET CONVERTER — RS485 — SF PRO CHARGER

+24VDC

GND (0V)
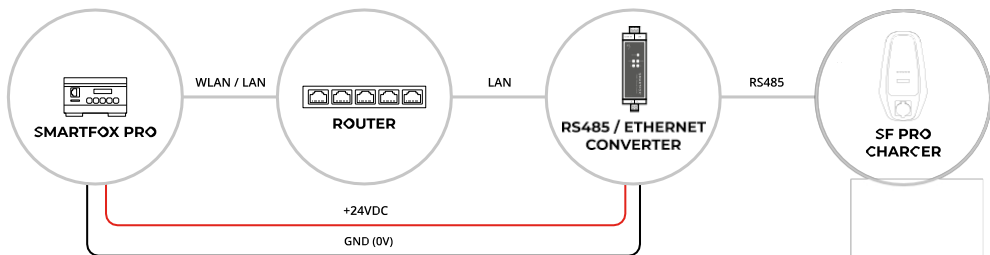
	SF Pro	RS485 / Ethernet Converter
SW	0V	-
RED	+24V	+

0V UD ID 24V
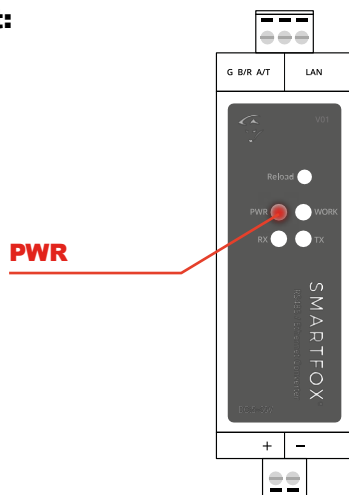
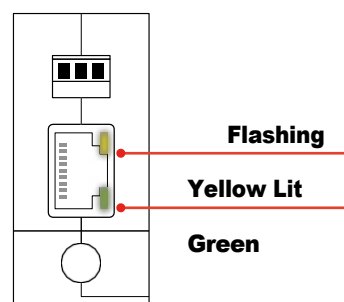### 3.3.2 Power supply via universal power supply unit

4. Commissioning

After switching on the power supply, the red "PWR" LED on the front of the unit lights up. The LEDs of the LAN socket light up green or flash yellow when a cable is connected.

NOTE: If no function is apparent, check the power supply and the network connection.
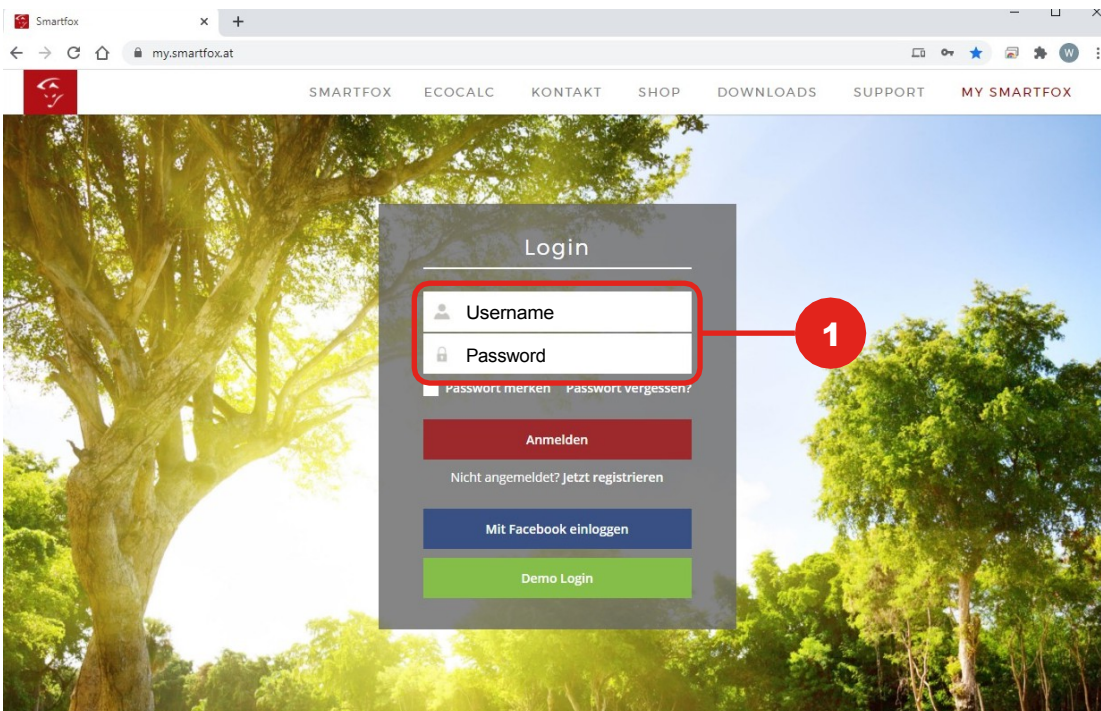
Front:

PWR

Top side:

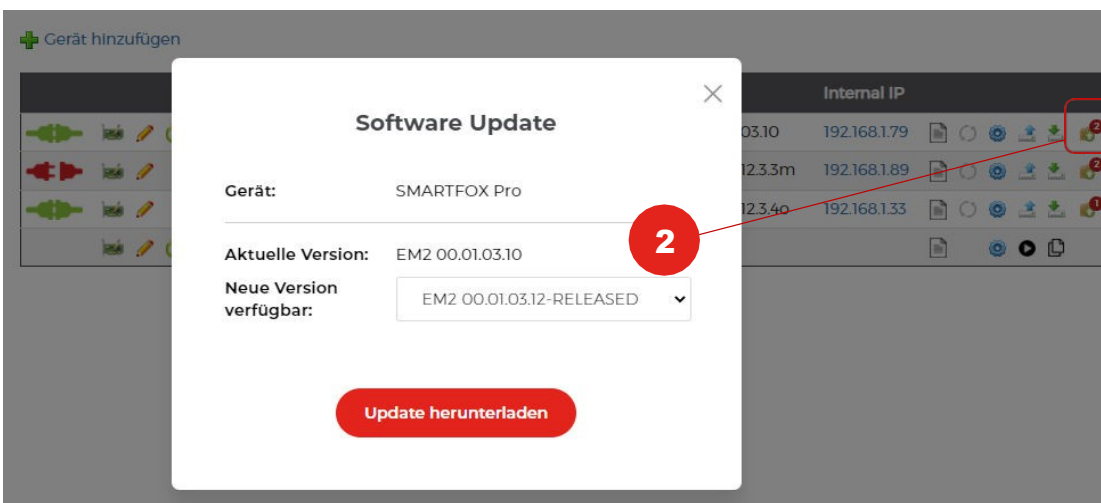Flashing

Yellow Lit

Green

5. Settings SMARTFOX

The following points only describe the points required for communication. For basic commissioning of the SMARTFOX Pro, please refer to the corresponding operating instructions.

Step 1:   Log in to my.smartfox.at

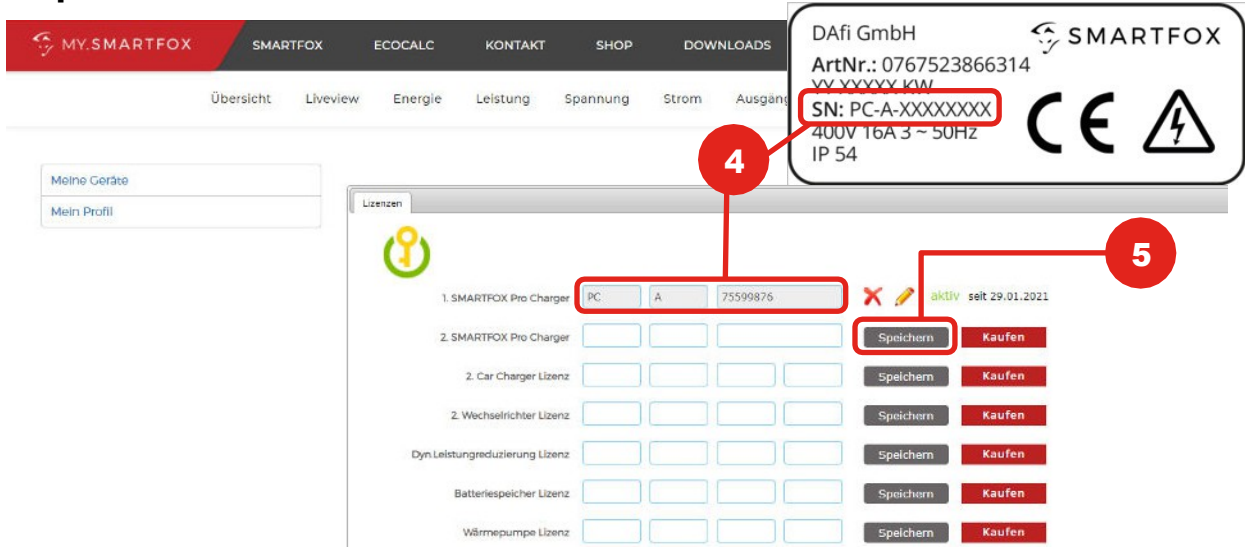**Step 2:**   Carry out software update if necessary (min. EM2 00.01.03.18 required)
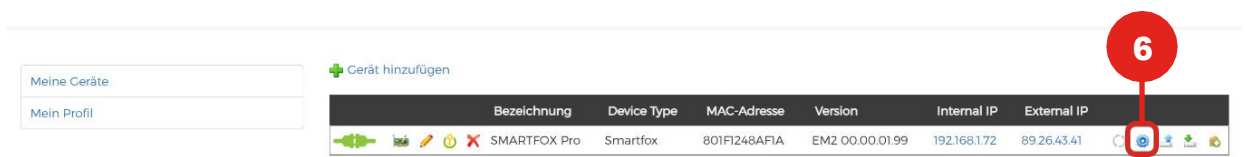

Step 3:   Open licence menu

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Step 4:   Enter the serial number (see type plate on charging station / packaging) of the SMARTFOX Pro Charger.
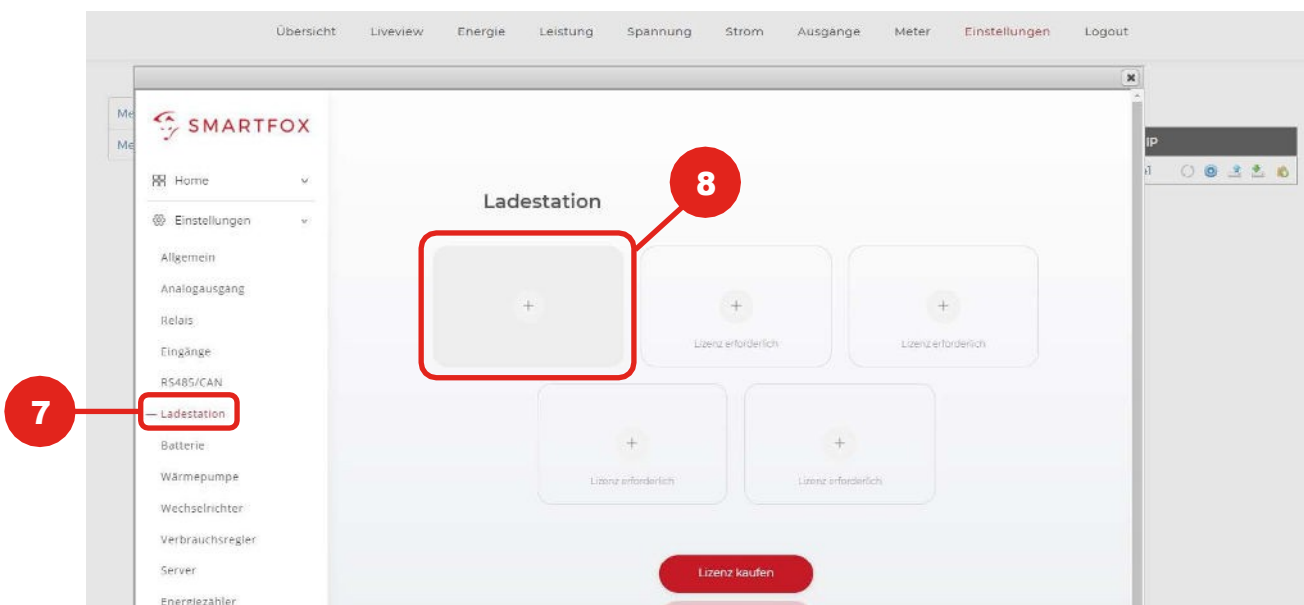
Step 5:   Click on "Save

Step 6:   Open the "unit parameterisation" by clicking on the cogwheel symbol.

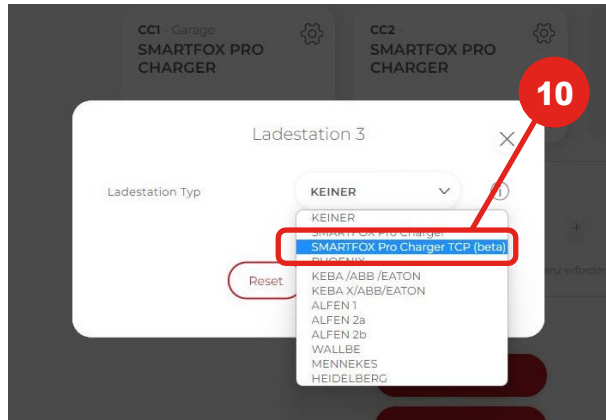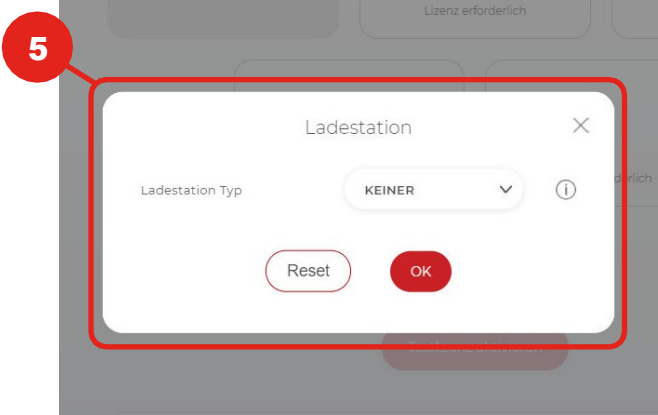**Step 7:**   Under "Settings" select menu "Charging station

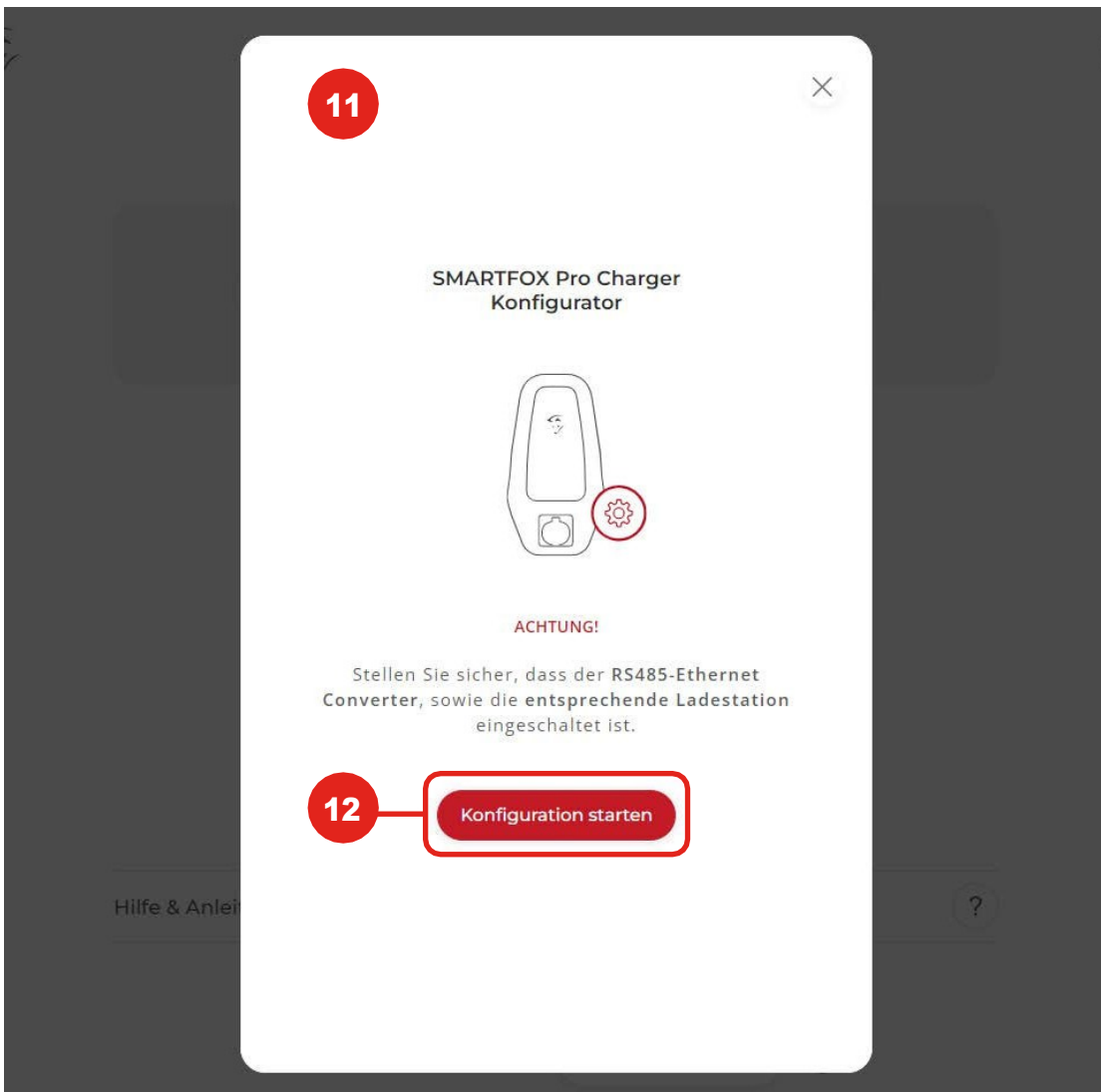**Step 8:**   Select free field by clicking

Step 9:   The pop-up window opens

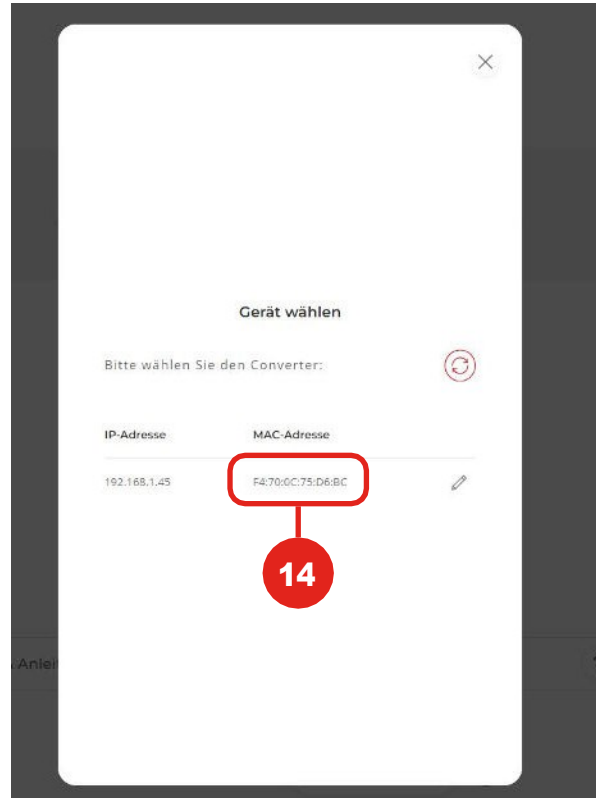**Step 10:**   Select "SMARTFOX Pro Charger TCP" in the drop-down menu.

Step 11:   The commissioning wizard is called up

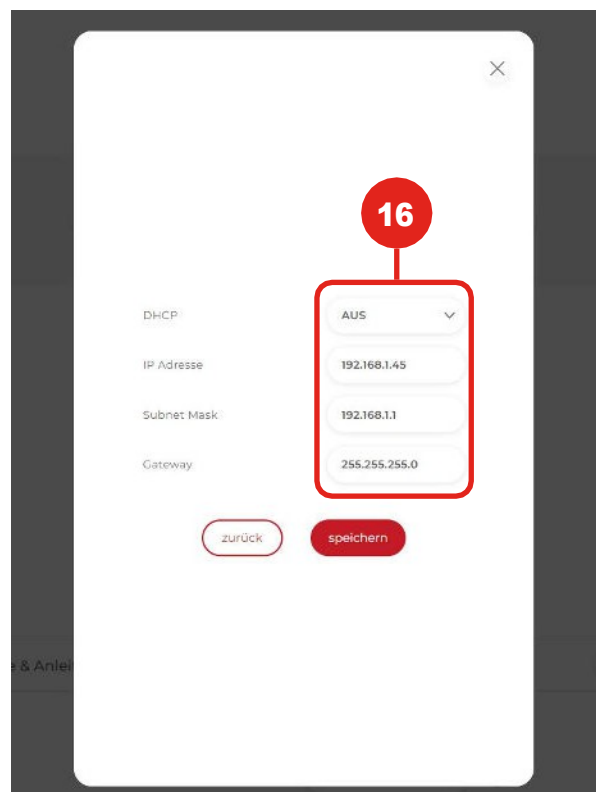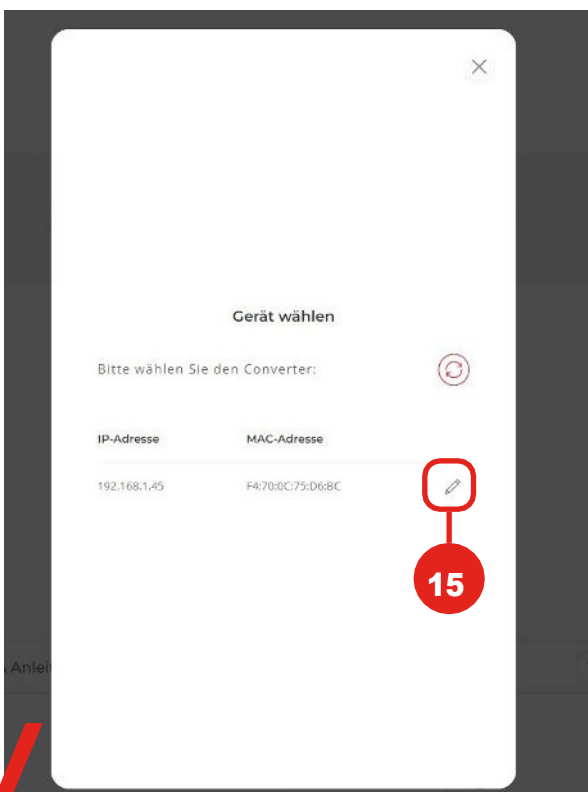**Step 12:**   Click on "Start configuration

Step 13: The search is on for accessible converters

**Step 14:** Accessible converters are displayed

Step 15: Clicking on the pencil symbol opens the
(Optional) Network settings

Step 16: If DHCP "Off" is selected, a static IP address can be assigned to the converter.
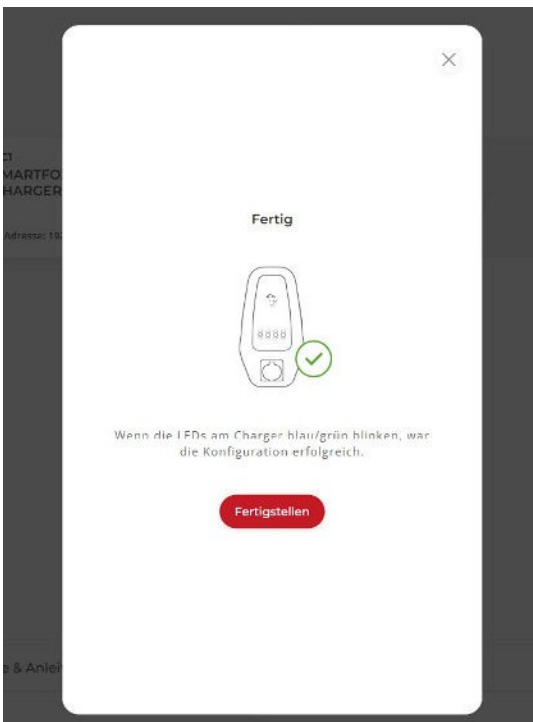**(Optional)** Address to be assigned

Step 17: Make sure that only the charger to be configured is switched on. and click on "Continue

**Step 18:** The charging station is configured. (May take 2-3 minutes)
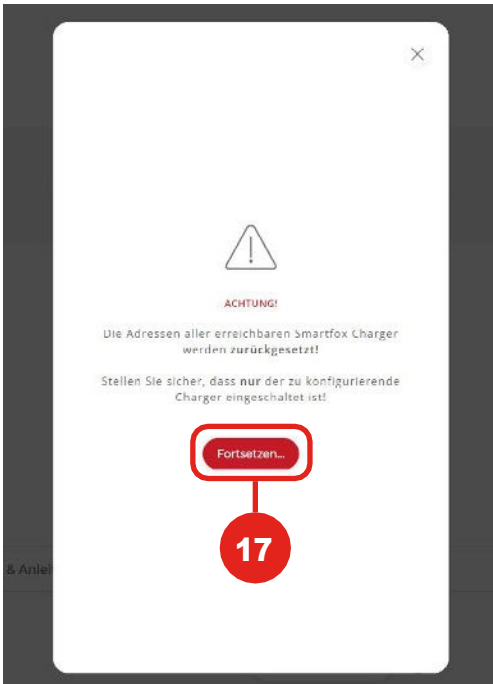
Step 19: Parameterisation is complete when the LEDs on the charger flash alternately blue/green

NOTE: If the configuration failed, check the power s u p p l y , network and RS485 connection.

Step 20: The charging station can now be configured (name, charging current…)
See operating instructions SMARTFOX Pro Charger

Step 21: Confirm with "OK
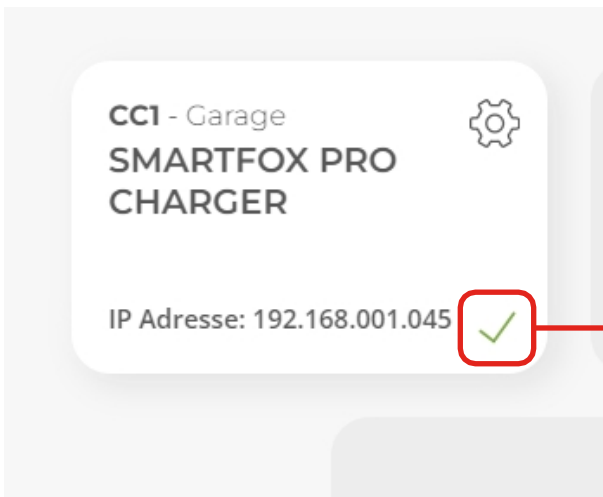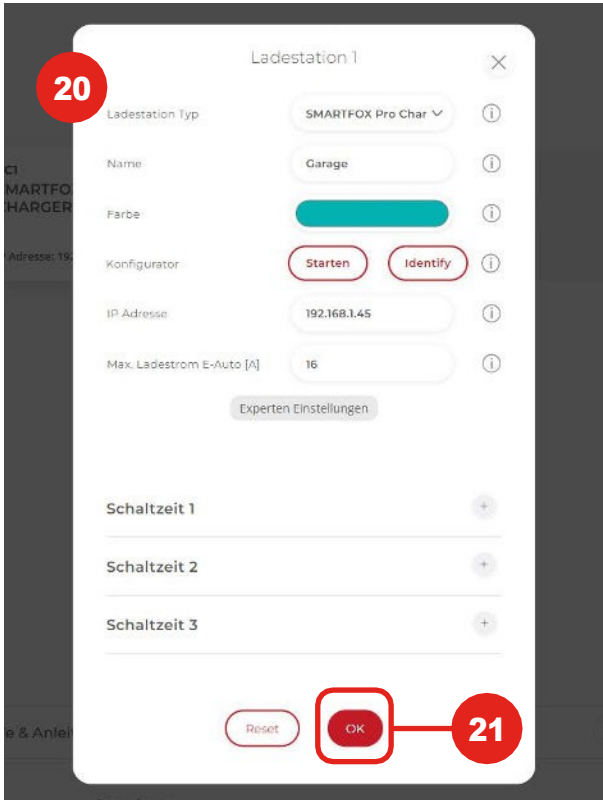
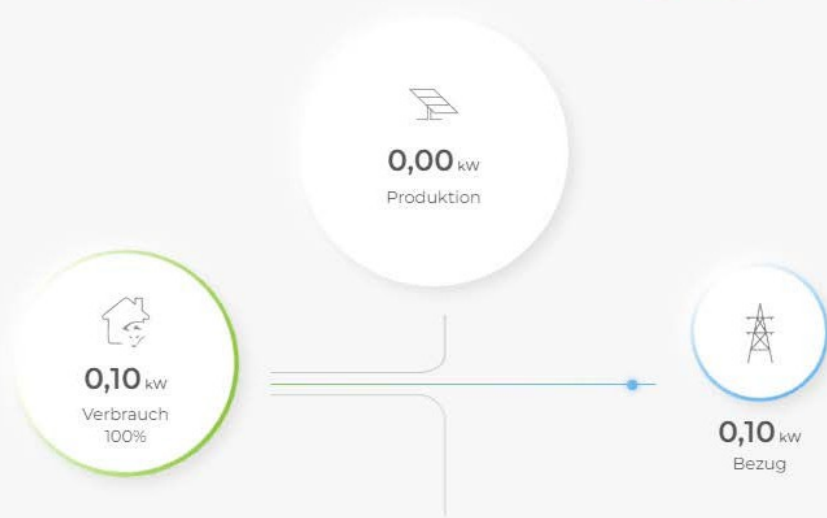The connection status of the converter is visualised by the icon at the bottom right:

Successful   Not successful

The SMARTFOX Pro Charger is now ready for use and is displayed in the monitoring.

6. Decommissioning

For short-term decommissioning and disassembly of the unit, follow the steps in chapters 3 & 4 in reverse order.

> ⚠️ **CAUTION! Improper disassembly & decommissioning may result in damage as well as danger to persons and objects. The work may only be carried out** by **a qualified electrician.**

7. Disposal

After final decommissioning, dispose of the unit & accessories in an environmentally friendly manner and sorted by type (plastic waste, metal scrap, electrical scrap etc. in accordance with the legal requirements). Before disposal, check the recyclability of the components. Dispose of the unit in a way that is compatible with people, the environment and nature and comply with the relevant laws and regulations.
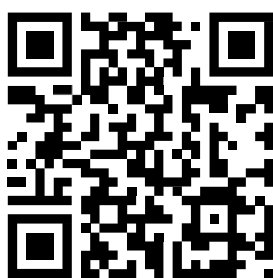
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Smartfox_Energy_Management

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