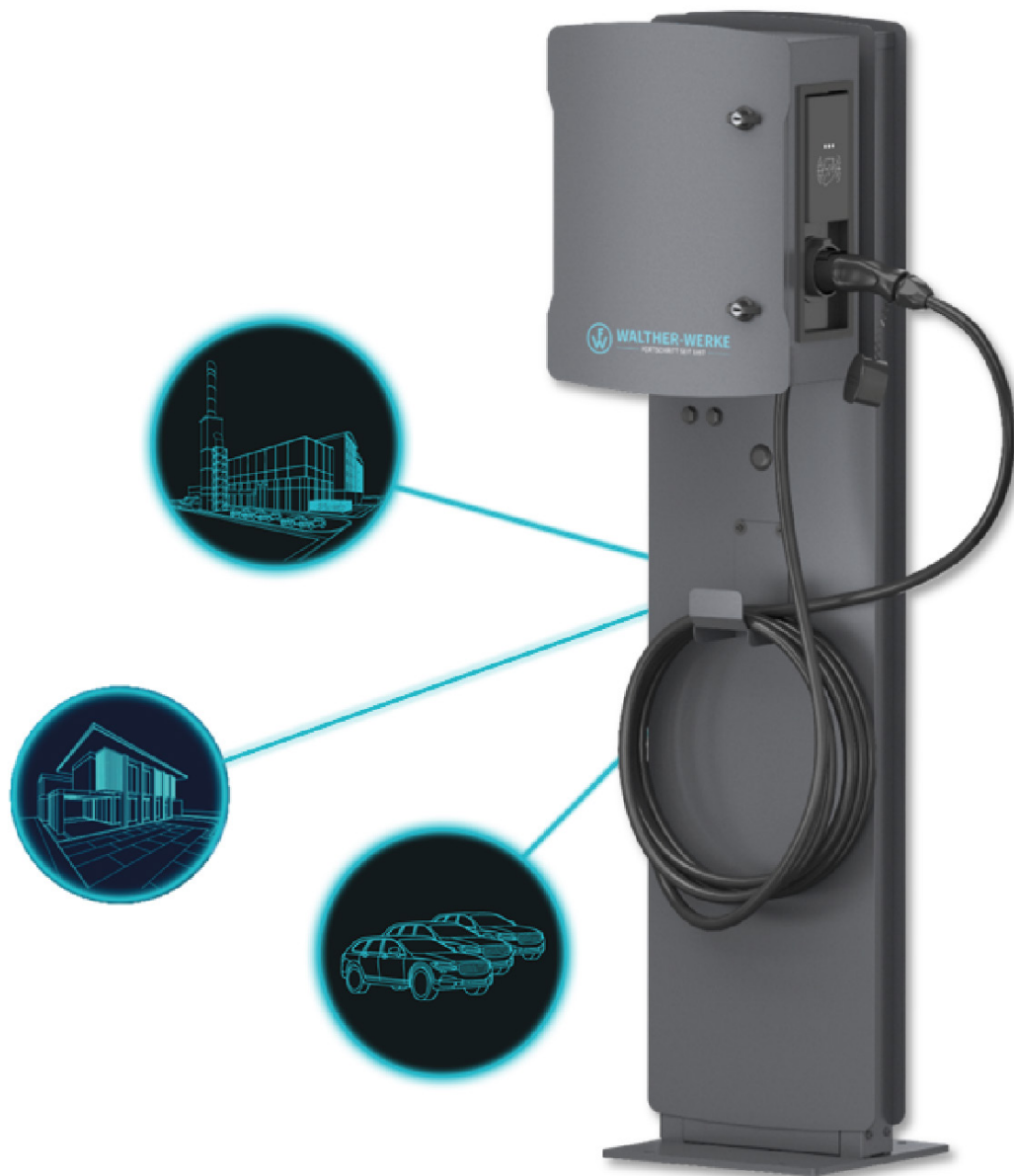


CHARGERS smartEVO / smartECO CONFIGURATION INSTRUCTIONS



Imprint

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Inhaltsverzeichnis

1	About these instructions	4
1.1	Associated documents	4
1.2	Symbols used	4
1.3	Relevant directives and standards	4
2	Access to the service portal	5
3	Examples of charging system configuration setups	6
3.1	Connection example of 2 chargers in a network without external network access	6
3.2	Connection example of 3 chargers in a network with backend	6
3.3	Connection example dynamic load management with external load control	7
3.4	Connection example dynamic load management with external load control and backend	7
4	Configure charger	8
4.1	Connecting the charge controller (Bender CC613)	8
4.2	Overview of user interface	10
4.3	Set parameters	12
4.4	Configure backend	13
4.5	Set DLM	16
4.6	RFID management	20
4.7	Update firmware	24
4.8	Read log files	25
5	Setting examples	26
5.1	Set the phase position in the charge controller	26
5.2	Set load management for three chargers	26
5.3	Load management with two chargers in a network (without external network access)	27
5.4	Set power limit	27

1 About these instructions

These configuration instructions are a supplementary document to the operating instructions for the smart charger product family. They describe the configuration options within charging infrastructure systems and the setting options in the user interface, for example for load management, and primarily apply for initial installation.

These configuration instructions are intended for operators and installers of charging infrastructure systems. They are valid from firmware 5.20 of the charge controller.

	<p>These configuration instructions describe a selection of configuration options. For more information on configuring the charge controller, visit the following URL: https://office.elinc.de/doku.php?id=start</p>
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1.1 Associated documents

- Operating instructions for the smart charger product family
- All safety instructions for the product as well as installation instructions from the network operator.


1.2 Symbols used

- ▶ Handling instruction.
When multiple steps are required, always follow the given order.
- Bulleted list, 1st level
 - Bulleted list, 2nd level

1.2.1 Structure of warning notices

	<p>SIGNAL WORD Type, source and consequence of hazard</p> <p>▶ Measures to avoid the hazard.</p>
--	--

1.2.2 Danger levels in warning notices

Symbol	Warning word	Consequences of non-compliance
	DANGER	Imminent danger that will result in death or serious injury if not avoided.
	WARNING	Possible imminent danger that may result in death or serious injury if not avoided.
	CAUTION	Possible imminent danger that may result in minor injury if not avoided.
–	CAUTION	Possible imminent danger that may result in property damage if not avoided.

1.3 Relevant directives and standards

- IEC 61851
- ISO 15118
- DIN VDE 0100-600
- DIN VDE 0105-100
- DIN VDE 0100-722

2 Access to the service portal



Configuration must always be carried out in consultation with the installer and, if necessary, in consultation with the network operator.
Registration is required to log in to the service portal.

Current downloads, such as software updates, installation and operating instructions, etc., are available on the WALTHER-WERKE service portal.

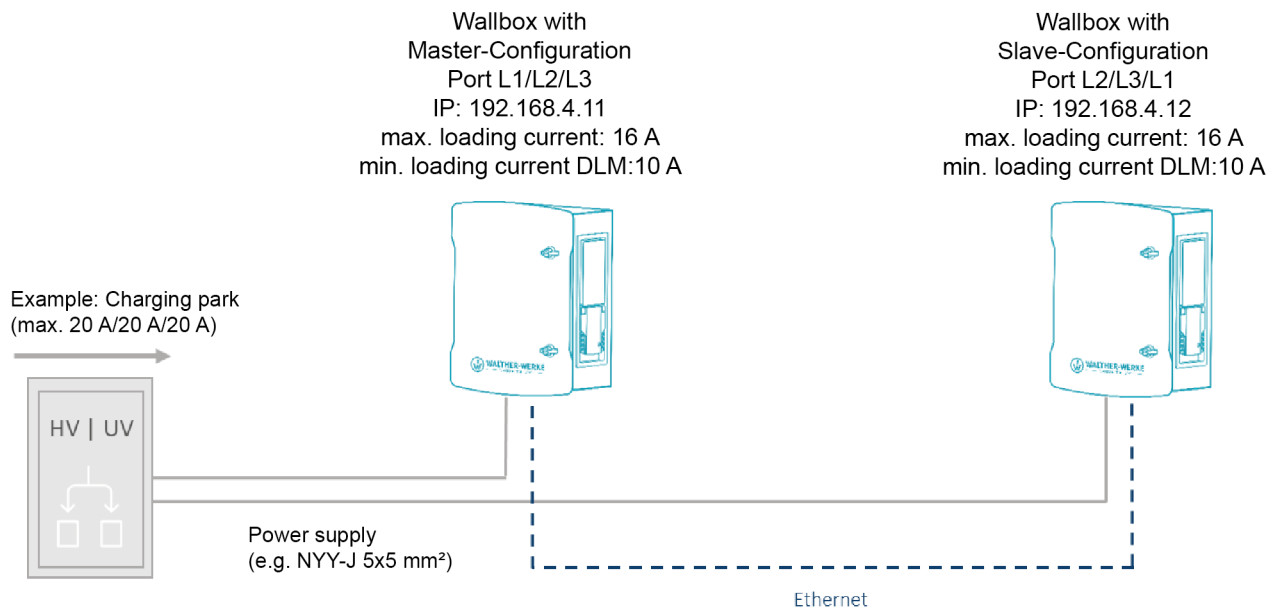
Link to the service portal: <https://www.walther-werke.de/serviceportal>

QR code to the service portal:

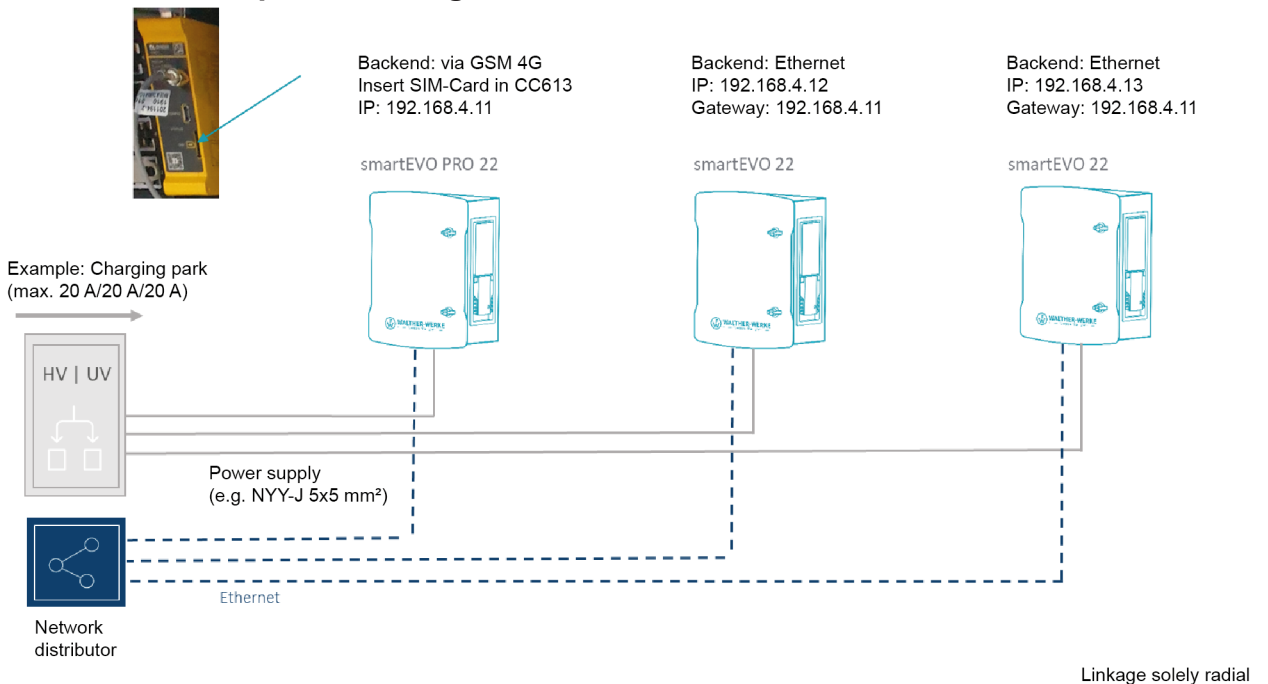


3 Examples of charging system configuration setups

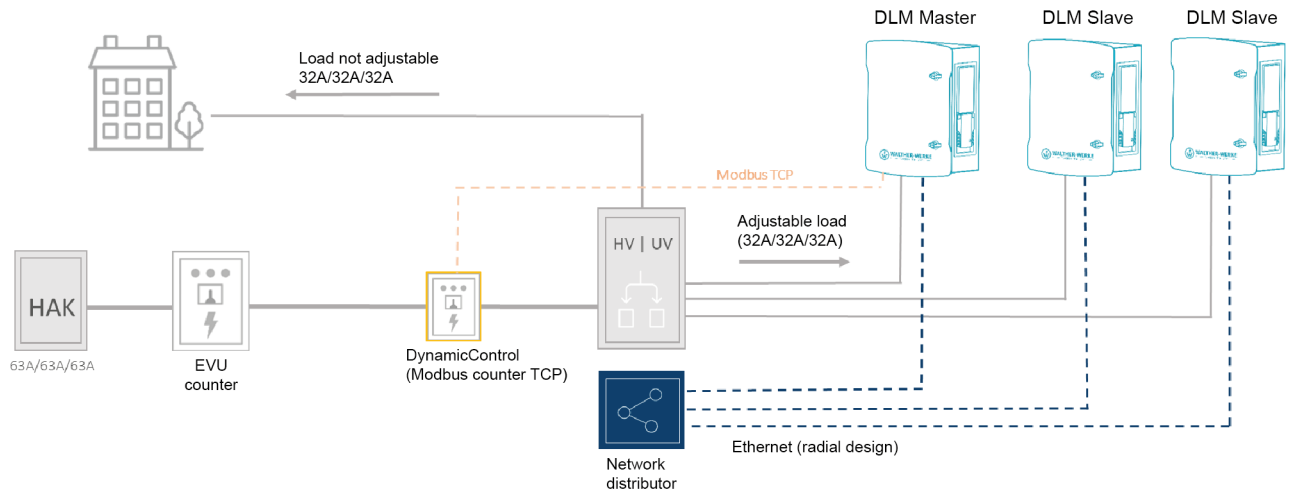
3.1 Connection example of 2 chargers in a network without external network access



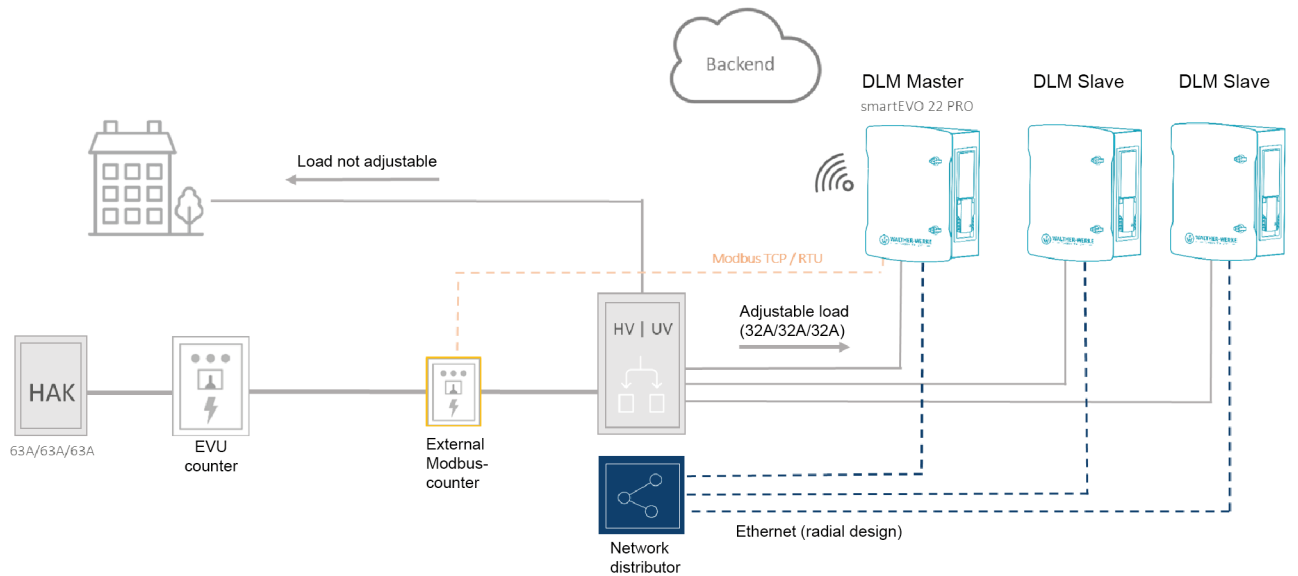
3.2 Connection example of 3 chargers in a network with backend



3.3 Connection example dynamic load management with external load control



3.4 Connection example dynamic load management with external load control and backend



4 Configure charger



The user settings described here apply to chargers of the smart product range, PRO version, from firmware 5.20 of the charge controller.

Requirements

- Charger is installed in accordance with the applicable standards and regulations.
- Function was tested during commissioning using a suitable vehicle simulation tester (e.g. EV tester).
- Charger has been commissioned in accordance with DIN VDE 0100-600 and is ready for operation.
- Safety instructions and operating instructions have been read and observed.
- USB cable MicroUSB to USB type A is ready.

4.1 Connecting the charge controller (Bender CC613)

4.1.1 Connect the charge controller to the PC



When connecting to a Windows, Linux or Mac computer, the USB configuration interface [CONFIG] emulates an RNDIS (Remote Network Driver Interface Specification) network. Starting with Windows 10, and on Linux and Mac operating systems, this virtual network is automatically recognised. A driver is not necessary. On a Windows host machine with a different Windows operating system, the driver for the RNDIS network adapter must be selected manually.



- ▶ Connect the charge controller to the PC using the USB cable. Status LED flashes green.

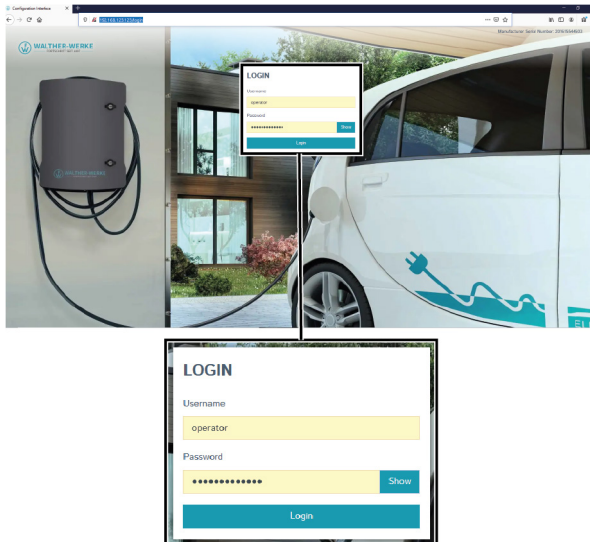
Perform the following steps only when using a Windows host machine with a different Windows operating system:

- ▶ Open the Device Manager in the Control Panel.
- ▶ Under [Other Devices], right-click [RNDIS/Ethernet Gadget] and select [Update Driver Software...].
- ▶ Select [Find driver software on the computer].
A list opens.
- ▶ Select [Select from a list of device drivers on the computer].
- ▶ Select the [Network Adapter] category.
A window opens.
- ▶ Select [Microsoft Corporation] as the manufacturer and [Remote NDIS-compatible device] as the network adapter.
The device driver is installed and the system recognises the charge controller as a network adapter.
- ▶ Open the web interface for configuration with a standard browser.
The charge controller uses the local IP address 192.168.123.123 with the subnet mask 255.255.255.0 via the USB configuration interface.

The connected device is automatically assigned a corresponding IP address via the Dynamic Host Configuration Protocol (DHCP) after the connection is established. Communication with the charging system is based on this IP address.

When connecting via Ethernet, the web interface can be reached via the set IP address of the respective charger (192.168.4.11 on delivery).

4.1.2 Connecting to the web interface of the charge controller



- ▶ To access the web interface of the charge controller, enter the following address in the browser: 192,168,123,123.
- ▶ Log in to the login field with the factory default login data. We recommend changing the password during your first session (see „Changing the password“ on page 9).
Factory default login data:
 - **User name: operator**
 - **Password: service.kraft**

4.1.3 Changing the password



- ▶ Select the entry [Password] in the navigation area.
- ▶ In the [Password] area, select the entry [Change Operator Password & Master RFID].
The [Change Operator Password & Master RFID] window opens.

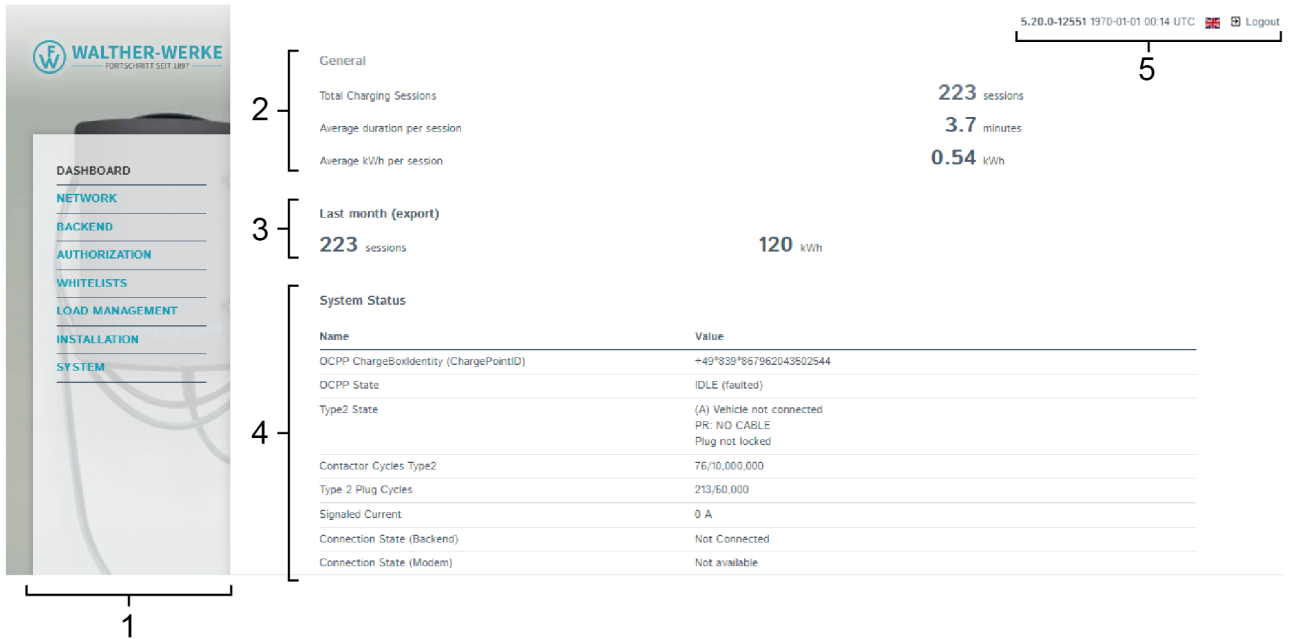
The image shows the 'CHANGE OPERATOR PASSWORD & MASTER RFID' window. It has three input fields: 'Enter new password' (with a masked password and a 'Show' button), 'Confirm new password' (empty), and 'Master RFID' (containing 'ABCDEFAB'). Below the fields are 'Save' and 'Cancel' buttons. A note at the bottom states: 'To program the Master RFID automatically, present any RFID card at the card reader now or enter a valid RFID UID in the text field above.'

- ▶ In the [Change Operator Password & Master RFID] window, change the password.
- ▶ Save the password change with the [Save] button.
Password is changed.

4.2 Overview of user interface

This chapter explains the basic layout of the user interface and the basic functions in the dashboard.

4.2.1 Dashboard



The dashboard provides an overview of the status of the charge controller.

- 1 Navigation area
- 2 General information
- 3 Charging history (for download)
- 4 Status area
- 5 System information (software version, language setting, logout)

4.2.2 Counter values

Energy Manager

Name	Value	Description
Configuration	Modbus Meter Finder	Type of meter used for the charging socket and its connector. This is relevant for OCPP transactions. For Modbus/RTU meters the address must be 1.
Serial number	AL8U101137	Serial number as reported by the eHZ or ModBus meter.
Meter public key (OCPP)		Public key of the cryptography engine of the connected OCPP meter if available.
Energy in Wh	Total: 1 [Wh]	Computed energy consumption in Wh.
Power in Watt	Total: 0 [W]	Computed power consumption in Watt from OCPP meter.
Current in A	(0.00 0.00 0.00) [A]	Phases Current in Ampere measured by OCPP meter.
Voltage in V	(223 223 223) [V]	Phases Voltage in Volts measured by OCPP meter.
Grid frequency (Hz) OCPP	Not available	Grid frequency in Hz measured by the OCPP meter.

The tab for setting the counter values is located in the status area of the dashboard.

On the [OCPP counters] tab, the properties of the counters are displayed together with their respective current value.

4.2.3 Energy Manager

Energy Manager

Energy Manager		OCPP Meter
Name	Value	Description
Energy Manager Main State	0 A	Energy manager overall state and current
Temperature Monitoring State	32 A (Ambient temperature: +26.0 C)	Temperature monitoring module's state and current
External Input State	32 A (Disabled)	External Input module's state and current
Relays Temperature State	Not supported	Relays Temperature module's state and current
OCPP Smart Charging State	32 A	OCPP Smart Charging module's state and current
Operator Current Limit	32 A	Current limit (in Ampere) set by the operator
DLM Current Applied	0 A (Disabled)	Available Charging Current assigned by DLM Master
ISO 15118 State	32 A (Disabled)	High Level Communication (15118) module's state and current
Eichrecht State	32 A	Eichrecht module's state and current
Vehicle If State	0 A	Vehicle If module's state and current
Error Handler State	80 A	Error Handler module's state and current
HEMS Modbus TCP Slave State	32 A (Disabled)	HEMS Modbus module's state and current
HEMS Semp Device State	32 A (Disabled)	HEMS Semp module's state and current
HEMS EEBUS State	32 A (Disabled)	HEMS EEBUS module's state and current

The tab for setting the energy-related properties is located in the status area of the dashboard.

On the [Energy Manager] tab, the energy-related properties of the charger are displayed with their respective current value.

4.2.4 DLM live display

DLM Status




The DLM live display is located in the status area of the dashboard.

The DLM live display is only visible if DLM is activated (DLM = dynamic load management). The DLM live display provides information about the current dynamic load management/energy distribution in the form of a graph.

4.3 Set parameters




We recommend setting the following parameters for initial installation.

4.3.1 Set network



The network address settings must be coordinated with your responsible IT administration.

LAN

Show LAN Configuration		Show	↕
Mode for ethernet configuration		Static	↕
Static network configuration IP		192.168.4.11	
Static network configuration netmask		255.255.255.0	
Static network configuration gateway			
Static network configuration DNS		8.8.8.8	

- ▶ Select the entry [Network] in the navigation area.





The network settings have to be adjusted depending on the configuration setup (the illustration shows the delivery status of the charge controller).

- ▶ For load management, make sure:
 - that the chargers are on the same network.
 - that the chargers have the same software version.
- ▶ When connecting several chargers, make sure that the IP address is changed.
Ex.: In parameter [IP for static network configuration], the IP address "192.168.4.11" is entered for charger 1. Charger 2 must therefore be given a different IP address, for example "192.168.4.12". An IP address must not be assigned more than once.

4.3.2 Set power

LOAD MANAGEMENT

Local

Operator Current Limit [A]		13	
Energy management from external input		Disable	↕
Disconnected Limit for SmartCharging		On	↕
Disconnected Upper Limit [A] for SmartCharging		10	




- ▶ Select the entry [Load Management] in the navigation area.

Under [Power/Load Management Local], you can set the maximum charging current to be available for the charging point.

Ex.: The value 13 is entered in [Operator current limit]. Thus, a maximum charging current of 13 A would be available for this charging point.

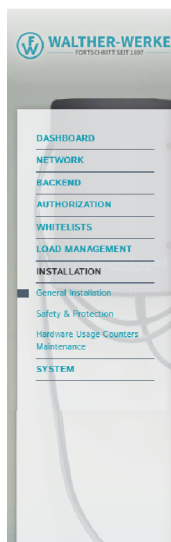
INSTALLATION

General Installation

Installation Current Limit [A]		16	
Phases connected to the ChargePoint		Three-phase system	↕
Phase rotation of the ChargePoint		RST (L1/L2/L3, Standard Reference Phasing)	↕

- ▶ Select the entry [Installation] in the navigation area.

Depending on the installation, the number of phases and the phase position of the charger must be set or checked before the first charge. This setting must be done by the electrician.



Wallbox with Master-Configuration
 Port L1/L2/L3
 IP: 192.168.4.11
 max. loading current: 32 A
 min. loading current DLM:16 A



Wallbox with Slave-Configuration
 Port L2/L3/L1
 IP: 192.168.4.12
 max. loading current: 32 A
 min. loading current DLM:16 A



Wallbox with Slave-Configuration
 Port L3/L1/L2
 IP: 192.168.4.13
 max. loading current: 32 A
 min. loading current DLM:16 A



Three-phase system	Three-phase system	Three-phase system
RST (L1/L2/L3, Standard Reference Phasing)	STR (L2/L3/L1, Standard 120 degree rotation)	TRS (L3/L1/L2, Standard 240 degree rotation)

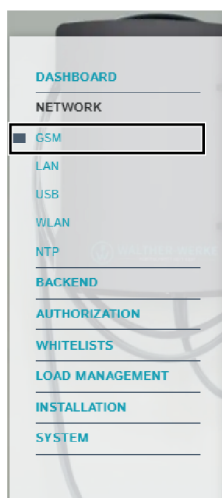
The figure shows an example of the setting for the number of phases and the phase position of the smartEVO 22 chargers in a charging infrastructure system.

4.4 Configure backend

4.4.1 Configure GSM backend connection



Settings only valid for chargers of the smart product range, PRO version, and with installed SIM card (gateway).



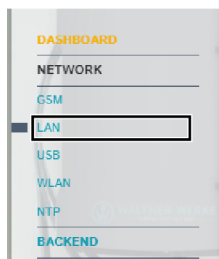
NETWORK

GSM

Show Modem Configuration	Show
Access Point Name (APN)	iot.telekom.net
APN Username	
APN Password	
SIM PIN	476567
Network selection mode	Auto
Modem Access Technology	Auto
Requested Network operator	
Network operator name format	Alphanumeric Short
WAN router	On
MTU	

- ▶ Select the entry [Network] in the navigation area.
- ▶ Under [Network], select the entry [GSM].
- ▶ Change the [Show modem setting] parameter to "Show".
- ▶ Change the parameter [WAN router] to "On" (only necessary if several chargers in the charging network are connected to the backend).

Configure charger



LAN		
Show LAN Configuration	ⓘ	Show
Mode for ethernet configuration	ⓘ	Static
Static network configuration IP	ⓘ	192.168.4.11
Static network configuration netmask	ⓘ	255.255.255.0
Static network configuration gateway	ⓘ	
Static network configuration DNS	ⓘ	8.8.8.8

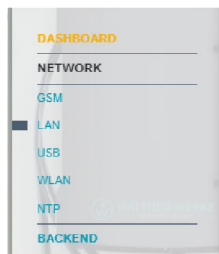
- ▶ Select the entry [Network] in the navigation area.
- ▶ Under [Network], select the entry [LAN].
- ▶ Remove gateway from the [Network mask for static network configuration] parameter (field must be empty).
- ▶ Adjust the parameter [DNS for static network configuration] (entry in figure as an example).



smartEVO 22



smartEVO 22



LAN		
Show LAN Configuration	ⓘ	Show
Mode for ethernet configuration	ⓘ	Static
Static network configuration IP	ⓘ	192.168.4.12
Static network configuration netmask	ⓘ	255.255.255.0
Static network configuration gateway	ⓘ	
Static network configuration DNS	ⓘ	8.8.8.8

ⓘ	Show
ⓘ	Static
ⓘ	192.168.4.13
ⓘ	255.255.255.0
ⓘ	
ⓘ	8.8.8.8

The illustration shows an example setting of the backend connection for the smartEVO 22 charger.

4.4.2 Configure backend

Configure identification for the backend

i

Each charging point requires its own ChargePointID.



DASHBOARD

NETWORK

BACKEND

Connection

OCPP

Other

Meter

Banner gateway

AUTHORIZATION

WHITELISTS

BACKEND

Connection	<input type="text" value="Ethernet"/>	<input type="text" value="Ethernet"/>
Connection Type	<input type="text" value="GSM"/>	
OCPP	<input type="text" value="+4978391000000000000000"/>	<input type="text" value="+4978391000000000000000"/>
OCPP Mode	<input type="text" value="OCPP-J 1.6"/>	<input type="text" value="OCPP-J 1.6"/>
WebSockets JSON OCPP URL of the Backend	<input type="text" value="ws://be.elinc.de:8080/OCPP/ProxyQA/v16/"/>	<input type="text" value="ws://be.elinc.de:8080/OCPP/ProxyQA/v16/"/>
Websockets proxy	<input type="text" value=""/>	<input type="text" value=""/>
Websockets token url (optional)	<input type="text" value=""/>	<input type="text" value=""/>
HTTP Basic Authentication password	<input type="text" value="6384639he"/>	<input type="text" value="6384639he"/>

- ▶ Select the entry [Backend] in the navigation area.
- ▶ Under [Backend], select the entry [OCPP].
The data to be entered is provided by the backend.
- ▶ Enter the ChargePointID provided by the backend for the respective charger.

Check connection to the backend



DASHBOARD

NETWORK

BACKEND

Connection

OCPP

Other

Meter

Banner gateway

AUTHORIZATION

WHITELISTS

BACKEND

Connection	<input type="text" value="Ethernet"/>	<input type="text" value="Ethernet"/>
Connection Type	<input type="text" value="GSM"/>	
OCPP	<input type="text" value="+4978391000000000000000"/>	<input type="text" value="+4978391000000000000000"/>
OCPP Mode	<input type="text" value="OCPP-J 1.6"/>	<input type="text" value="OCPP-J 1.6"/>
WebSockets JSON OCPP URL of the Backend	<input type="text" value="ws://be.elinc.de:8080/OCPP/ProxyQA/v16/"/>	<input type="text" value="ws://be.elinc.de:8080/OCPP/ProxyQA/v16/"/>
Websockets proxy	<input type="text" value=""/>	<input type="text" value=""/>
Websockets token url (optional)	<input type="text" value=""/>	<input type="text" value=""/>
HTTP Basic Authentication password	<input type="text" value="6384639he"/>	<input type="text" value="6384639he"/>

The overview of the dashboard shows the connection status.

4.5 Set DLM

Individual parameters that can be set for dynamic load management are shown here as examples.

Wallbox with Master-Configuration
Port L1/L2/L3
IP: 192.168.4.11
max. loading current: 32 A
min. loading current DLM:16 A

Wallbox with Slave-Configuration
Port L2/L3/L1
IP: 192.168.4.12
max. loading current: 32 A
min. loading current DLM:16 A

Wallbox with Slave-Configuration
Port L3/L1/L2
IP: 192.168.4.13
max. loading current: 32 A
min. loading current DLM:16 A

Dynamic Load Management - DLM Master/Slave	DLM Master (With internal DLM-Slave)	DLM-Slave (Master-Auto-Discovery)	DLM-Slave (Master-Auto-Discovery)
DLM Network Id	0	0	0
Disable Discovery Broadcasting	Off	16	16
DLM Algorithm Sample Rate	30 sec	10	10
Allow EV Wakeup	On		
EVSE Sub-Distribution Limit (L1/L2/L3) [A]	40	40	40
Operator EVSE Sub-Distribution Limit (L1/L2/L3) [A]	32	32	32
External Input 1 Config	Disable		
External Input 2 Polarity	Active high		
External Meter Support	Off		
Current Imbalance Prevention	Off		
Minimum Current Limit [A]	16		
Disconnected Limit [A]	10		

The figure shows an example of the settings for dynamic load management of the smartEVO 22 chargers in a charging infrastructure system.

4.5.1 Set DLM master

Dynamic Load Management

Dynamic Load Management - DLM Master/Slave	<i>i</i>	DLM Master (With internal DLM-Slave)
DLM Network Id	<i>i</i>	0
Disable Discovery Broadcasting	<i>i</i>	Off
DLM Algorithm Sample Rate	<i>i</i>	30 sec
Allow EV Wakeup	<i>i</i>	On
EVSE Sub-Distribution Limit (L1/L2/L3) [A]	<i>i</i>	40
Operator EVSE Sub-Distribution Limit (L1/L2/L3) [A]	<i>i</i>	32
External Input 1 Config	<i>i</i>	Disable
External Input 2 Polarity	<i>i</i>	Active high
External Meter Support	<i>i</i>	Off
Current Imbalance Prevention	<i>i</i>	Off
Minimum Current Limit [A]	<i>i</i>	16
Disconnected Limit [A]	<i>i</i>	10

- ▶ Select the entry [Load Management] in the navigation area.

Depending on the configuration setup, various settings for distribution between the individual chargers can be made under [Dynamic Load Management].

- ▶ Configure the following parameters for initial installation:
 - Set the current to be distributed:
 - [Set Charger Subdistribution Current Limit (L1/L2/L3) [A]]
 - [Set Operator Subdistribution Current Limit (L1/L2/L3) [A]]
 - Set the minimum current:
 - [Minimum Current Limit [A]]
 - Set current in case of lost connection
 - [Current limit in the event of connection failure [A]]



After the parameters have been configured:

- ▶ Save changes with the [Save] button.
- ▶ Restart the charge controller with the [Restart] button.

4.5.2 Set EEBUS

EEBUS		
EEBus Protocol (On/Off)		On
Fallback Current [A]		6
Communication Timeout [s]		4
Select pairing action		
Pairing Status		Unpaired

- ▶ Select the entry [Load Management] in the navigation area.

The settings for the EEBUS have to be adjusted depending on the configuration setup.

4.5.3 Set EMS/Modbus

Modbus		
Modbus TCP Server		On
Modbus TCP Server Base Port		502
Modbus TCP Server Register Address Set		TQ-DM100

- ▶ Select the entry [Load Management] in the navigation area.

The settings for the Modbus have to be adjusted depending on the configuration setup.

4.5.4 Set SMA

SMA Sunny Home Manager Interface		
SMA Interface (On/Off)		On
SMA Communication Timeout Current [A]		6
SMA Communication Timeout [s]		600
SMA Max Energy Demand [kWh]		30
SMA Min Energy Demand [kWh]		5
SMA Charge Complete Time [hh:mm]		08:00

- ▶ Select the entry [Load Management] in the navigation area.

The settings for SMA have to be adjusted depending on the configuration setup.

4.5.5 Set external counter support

The screenshot shows the configuration page for a Walthert-Werke charger. On the left is a navigation menu with 'LOAD MANAGEMENT' selected. The main area displays various configuration parameters:

- Operator EVSE Sub-Distribution Limit (L1/L2/L3) [A]: 16, 16, 16
- External Input 1 Config: Disable
- External Input 2 Polarity: Active high
- External Meter Support: On
- Meter configuration (Second): Modbus TQ EM410/EM420 (TCP)
- Main Distribution Limit (L1/L2/L3) [A]: 100, 100, 100
- External Load Headroom (L1/L2/L3) [A]: 0, 0, 0
- External Load Fallback (L1/L2/L3) [A]: 9999, 9999, 9999
- External Meter Location: Including EVSE Sub-Distribution
- External Load Averaging Length [sec]: 5

Select the entry [Load Management] in the navigation area.

The external counter support can be activated here. Depending on the configuration setup, settings for external counters can be made, e.g.:

- Modbus RTU counter (e.g. dynamicControl - CarloGavazzi EM210) - only for chargers with PRO version
Setting on the counter (Modbus RTU)
 Modbus address: 2
 Baud rate: 9600
- Modbus TCP counter (e.g. dynamicControl TCP JANITZA PA 96+ or TQ EM410/420)

Energy Manager OCPP Meter Second Meter		
Name	Value	Description
Meter configuration (Second)	Modbus TQ EM410/EM420 (TCP)	Energy Management: the type of second meter used only for input to manage the current on the grid. For Modbus/RTU meters the address must be 2.
Meter serial number (Second)	No Id read yet	Serial number as reported by the eHZ or ModBus meter
Energy in Wh (Second)	Not available	Computed energy consumption in Wh from second meter.
Power in Watt (Second)	Not available	Computed power consumption in Watt from second meter
Current in A (Second)	Not available	Phases current in Ampere measured by second meter.
Voltage in V (Second)	Not available	Phases voltage in Volts measured by second meter
Grid frequency (Hz) (Second)	Not available	Grid frequency in Hz measured by the second meter.

In the dashboard, you can check whether the counter is active on the [External counter] tab.

4.5.6 Set NTP usage



To use NTP, the charger must be connected to the Internet. The NTP server is set to ntp.elinc.de. This server is operated by ebee. You can also select a different NTP server.

Static network configuration IP	192.168.4.11
Static network configuration netmask	255.255.255.0
Static network configuration gateway	
Static network configuration DNS	8.8.8.8
USB	
Show USB Configuration	Hide
WLAN	
WLAN enabled	Off
NTP	
NTP client	On
NTP server 1 configuration	time.google.com
NTP server 2 configuration	
NTP server 3 configuration	
NTP server 4 configuration	

If the backend connection is set to "No backend" and restarted, NTP is active.

- ▶ Select the entry [Network] in the navigation area.
- ▶ Under [Network], select the entry [NTP].
- ▶ In the parameters [Configuration of NTP server 1/2/3/4], set the backup server(s) (either as host name or IP address).

SYSTEM	
General	
Timezone	UTC
Local time for housekeeping reboot	0
Number of days for housekeeping reboot	30
Log Level	LOG_LEVEL_DBG
Download Log Files	Download
USB Security	

- ▶ Select the entry [System] in the navigation area.
- ▶ Under [System], select the entry [General].
- ▶ Use the [Time Zone] parameter to configure the local time zone (e.g. to Berlin for Germany). The time is then automatically switched from summer to winter time.



If the law regarding daylight saving time is changed, an update will be necessary.

4.6 RFID management

4.6.1 Read RFID cards

WALTHERT-WERKE
FORTSCHRITT SITT 1897

5.20.0-12551 1970-01-01 00:14 UTC Logout

DASHBOARD
NETWORK
BACKEND
AUTHORIZATION
WHITELISTS
LOAD MANAGEMENT
INSTALLATION
SYSTEM

General

Total Charging Sessions **223** sessions

Average duration per session **3.7** minutes

Average kWh per session **0.54** kWh

Last month (export)
223 sessions **120** kWh

System Status

Name	Value
OCPP ChargeBoxIdentity (ChargePointID)	+49*839*967962043602644
OCPP State	IDLE (faulted)
Type2 State	(A) Vehicle not connected PR: NO CABLE Plug not locked
Contactor Cycles Type2	76/10.000.000
Type 2 Plug Cycles	213/50.000
Signaled Current	0 A
Connection State (Backend)	Not Connected
Connection State (Modem)	Not available

AUTHORIZATION
Free Charging
General
RFID Settings
RFID Whitelists
HLC 15119
WHITELISTS
LOAD MANAGEMENT
INSTALLATION
SYSTEM

RFID Tag letter case ⓘ Lower Case ▾

Enforce Master RFID ⓘ Off ▾

Language of Display ⓘ English ▾

RFID Whitelists

Enable local whitelist ⓘ On ▾

Enable OCPP whitelist ⓘ On ▾

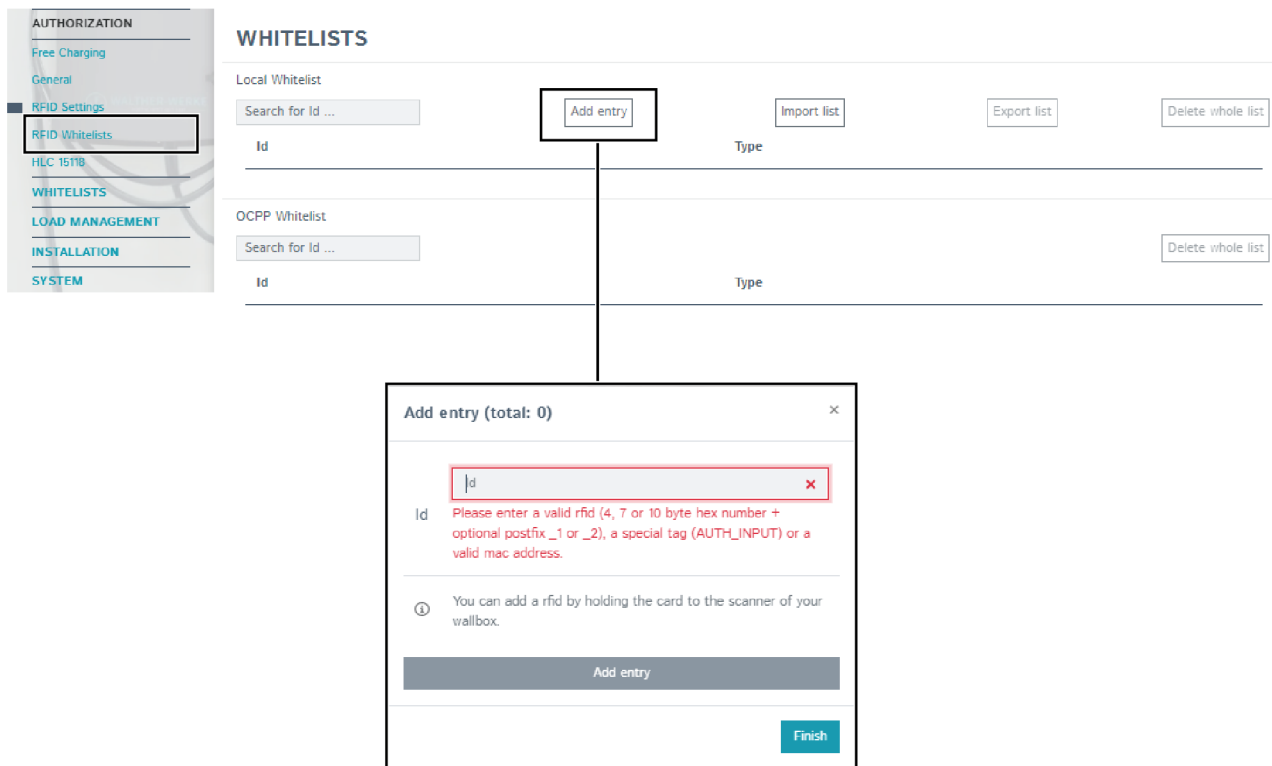
OCPP whitelist expiry mode ⓘ End of epoch 2038 (default) ▾

Local Pre Authorize ⓘ On ▾

Local Authorize Offline ⓘ On ▾

To read new RFID cards:

- ▶ Select the entry [Authorisation] in the navigation area.
- ▶ Under [Authorisation], select the entry [RFID Settings].
- ▶ Change the [Enable Local Whitelist] parameter to "On".



- ▶ Select the entry [Authorisation] in the navigation area.
- ▶ Under [Authorisation], select the entry [RFID Whitelists].
- ▶ Select the [Add Entry] button to open the [Add Entry] window.
- ▶ On the RFID card reader of the charger: When the LED of the RFID card reader lights up green, hold the RFID card up to the card reader (card symbol). The LED of the RFID card reader lights up blue. The RFID card is read. The respective RFID number is entered in the [Add Entry] window.
- ▶ Confirm the RFID number with the button [Add entry].
- ▶ If desired, repeat the process for additional RFID cards.

4.6.2 Activate charging with backend only

RFID Whitelists		
Enable local whitelist		On
Enable OCPP whitelist		On
OCPP whitelist expiry mode		End of epoch 2038 (default)
Local Pre Authorize		On
Local Authorize Offline		On

To enable charging with backend only:

- ▶ Select the entry [Authorisation] in the navigation area.
- ▶ Under [Authorisation], select the entry [RFID Settings].
- ▶ Change the [Local Pre Authorize] parameter to "On".

4.6.3 Activate charging via local whitelist in case of backend failure (OCPP)

RFID Whitelists		
Enable local whitelist		On
Enable OCPP whitelist		On
OCPP whitelist expiry mode		End of epoch 2038 (default)
Local Pre Authorize		Off
Local Authorize Offline		On

To enable charging via local whitelist in case of backend failure (OCPP):

- ▶ Select the entry [Authorisation] in the navigation area.
- ▶ Under [Authorisation], select the entry [RFID Settings].
- ▶ Change the [Local Pre Authorize] parameter to "Off".
- ▶ Change the [Local Authorize Offline] parameter to "On".

4.6.4 Bidirectional communication: ISO 15118

HLC 15118

15118 Configuration		On (With PlugNCharge)
OCPP 1.6 extension for 15118 certificate installation		Ebee
Extra logging		On
Autocharge		On

To enable bidirectional communication according to ISO 15118:

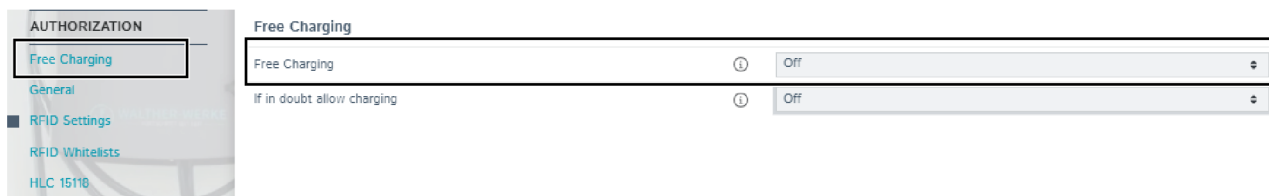
- ▶ Select the entry [Authorisation] in the navigation area.
- ▶ Under [Authorisation], select the entry [RFID Settings].
- ▶ Change the parameter [15118 Configuration] to "On".

The screenshot shows the 'WHITELISTS' configuration page. On the left is a navigation menu with 'RFID Settings' selected. The main area has two sections: 'Local Whitelist' and 'OCPP Whitelist'. Each section has a search bar and an 'Add entry' button. A modal dialog titled 'Add entry (total: 0)' is open, showing a text input field for 'Id' with a red border and a red 'x' icon. Below the input field is a red error message: 'Please enter a valid rfid (4, 7 or 10 byte hex number + optional postfix _1 or _2), a special tag (AUTH_INPUT) or a valid mac address.' Below the error message is an information icon and a tip: 'You can add a rfid by holding the card to the scanner of your wallbox.' At the bottom of the modal are 'Add entry' and 'Finish' buttons.

If desired, the UID of the vehicle can be added automatically via the whitelist. To do so:

- ▶ Change the entry [Autocharge] to "On".
- ▶ Select the entry [Authorisation] in the navigation area.
- ▶ Under [Authorisation], select the entry [RFID Whitelists].
- ▶ Select the [Add Entry] button to open the [Add Entry] window.
- ▶ Plug in the vehicle.
The vehicle UID is read.
- ▶ Close the window with the [Exit] button.
The vehicle UID is saved on closing.

4.6.5 Activate free charging



- ▶ Select the entry [Authorisation] in the navigation area.
- ▶ Under [Authorisation], select the entry [Free Charging].
- ▶ Change the [Free Charging] parameter to "On".

4.7 Update firmware

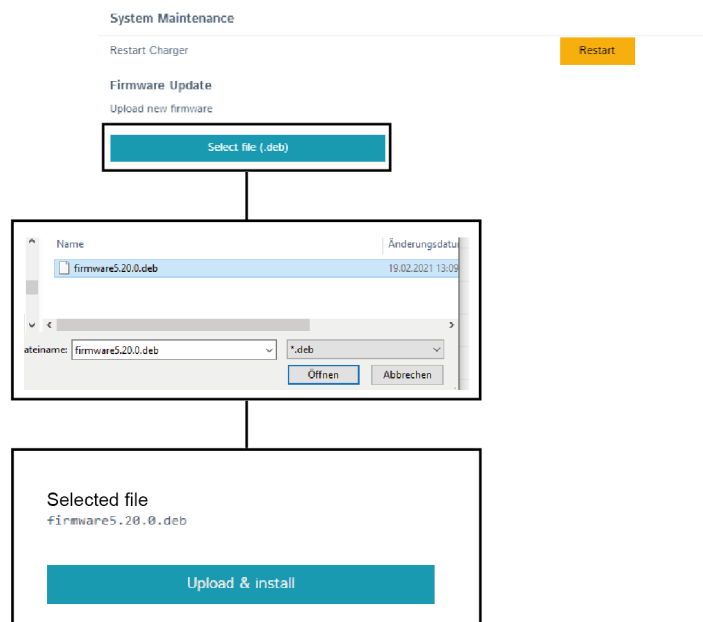
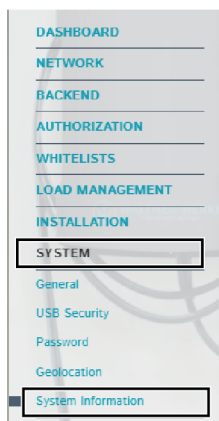


Firmware versions within the DLM must match.
It is not possible to downgrade the firmware.
Registration is required to log in to the service portal.

- ▶ Read the log files before updating the firmware (see “4.8 Read log files” on page 25).



- ▶ To download the firmware, open the service portal at www.walther-werke.de/serviceportal/ or use the QR code on the touch guard.
- ▶ Download and save firmware.



To perform firmware updates:

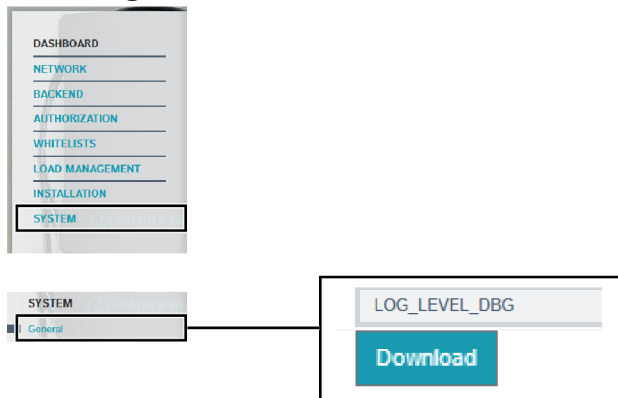
- ▶ Select the entry [System] in the navigation area.
- ▶ Under [System], select the entry [System Information].
- ▶ Open the window for selecting data via the [Select Data] button.
- ▶ Select and open the downloaded firmware.
- ▶ Install the selected file with the [Upload & Install] button.
- ▶ Wait until the update is finished.



During the update, the charge controller CC613 will restart several times. The power supply must not be interrupted during this time.

- ▶ After completing the update, check the configuration settings.

4.8 Read log files



To read the log files (process logs):

- ▶ Select the entry [System] in the navigation area.
- ▶ Under [System], select the entry [General].
- ▶ Download log files via the [Download] button.

5 Setting examples

5.1 Set the phase position in the charge controller

DASHBOARD

NETZWERK

BACKEND

AUTORISIERUNG

LASTMANAGEMENT

INSTALLATION

Allgemeine Installation

Sicherheit & Schutz

Hardwareabnutzungszähler

Einstellungen


SYSTEM

Schematische Darstellung Verbindung der Ladeeinrichtung
Wallbox smartEVO 22


(Vernetzung ausschließlich Sternförmig)

Einstellungen der Phasenlage im ChargeController


DLM- Master mit integr. Slave
Anschluss L1/L2/L3
IP: 192.168.4.11
Max. Ladestrom: 32A
Min Ladestrom DLM: 16A



DLM- Slave
Anschluss L2/L3/L1
IP: 192.168.4.12
Max. Ladestrom: 32A
Min Ladestrom DLM: 16A



DLM- Slave
Anschluss L3/L1/L2
IP: 192.168.4.13
Max. Ladestrom: 32A
Min Ladestrom DLM: 16A



Allgemeine Installation	
Strombegrenzung der Installation [A]	32
Anzahl der Phasen die am Ladepunkt angeschlossen sind	Dreiphasiges System
Phasendrehrichtung des Ladepunkts	RST (L1/L2/L3, Standard Phasenlage)

Änderungen speichern und Laderegler neu starten

Reset all changes Save Restart

- ▶ Select the entry [Installation] in the navigation area.
- ▶ Under [Installation], select the entry [General Installation].

The following parameters are set under [General Installation]:

- Number of phases connected to the charging point
- Phase rotation direction of the charging point

5.2 Set load management for three chargers

DASHBOARD

NETZWERK

BACKEND

AUTHORIZATION

WHITELISTS

LOAD MANAGEMENT

Local


Modbus

SMA Sunny Home Manager Interface


EEBUS

ASU over OCPP-S


Wallbox with Master-Configuration
Port L1/L2/L3
IP: 192.168.4.11
max. loading current: 32 A
min. loading current DLM: 16 A



Wallbox with Slave-Configuration
Port L2/L3/L1
IP: 192.168.4.12
max. loading current: 32 A
min. loading current DLM: 16 A



Wallbox with Slave-Configuration
Port L3/L1/L2
IP: 192.168.4.13
max. loading current: 32 A
min. loading current DLM: 16 A



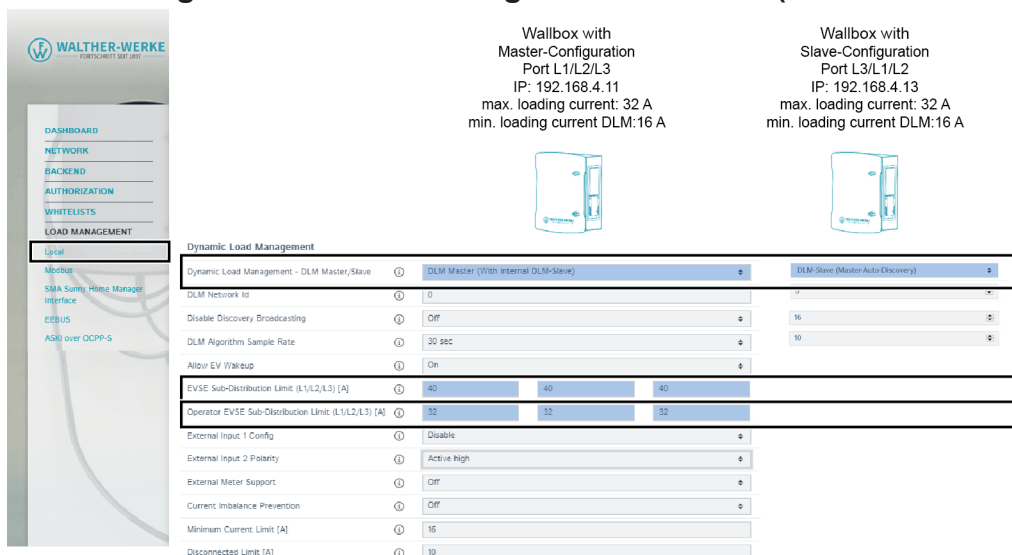
Dynamic Load Management			
Dynamic Load Management - DLM Master/Slave	DLM Master (With internal DLM-Slave)	DLM Slave (Master Auto Discovery)	DLM Slave (Master Auto Discovery)
DLM Network Id	0	17	17
Disable Discovery Broadcasting	Off	16	16
DLM Algorithm Sample Rate	30 sec	10	10
Allow EV Wakeup	On		
EVSE Sub-Distribution Limit (L1/L2/L3) [A]	40	40	40
Operator EVSE Sub-Distribution Limit (L1/L2/L3) [A]	32	32	32
External Input 1 Config	Disable		
External Input 2 Polarity	Active High		
External Meter Support	Off		
Current Imbalance Prevention	Off		
Minimum Current Limit [A]	16		

- ▶ Select the entry [Load Management] in the navigation area.
- ▶ Under [Load Management], select the entry [Local].

The following parameters are set under [Local], for example:

- Dynamic Load Management - DLM Master/Slave
- [Set Charger Subdistribution Current Limit (L1/L2/L3) [A]]
- [Set Operator Subdistribution Current Limit (L1/L2/L3) [A]]

5.3 Load management with two chargers in a network (without external network access)



Wallbox with Master-Configuration
Port L1/L2/L3
IP: 192.168.4.11
max. loading current: 32 A
min. loading current DLM: 16 A

Wallbox with Slave-Configuration
Port L3/L1/L2
IP: 192.168.4.13
max. loading current: 32 A
min. loading current DLM: 16 A

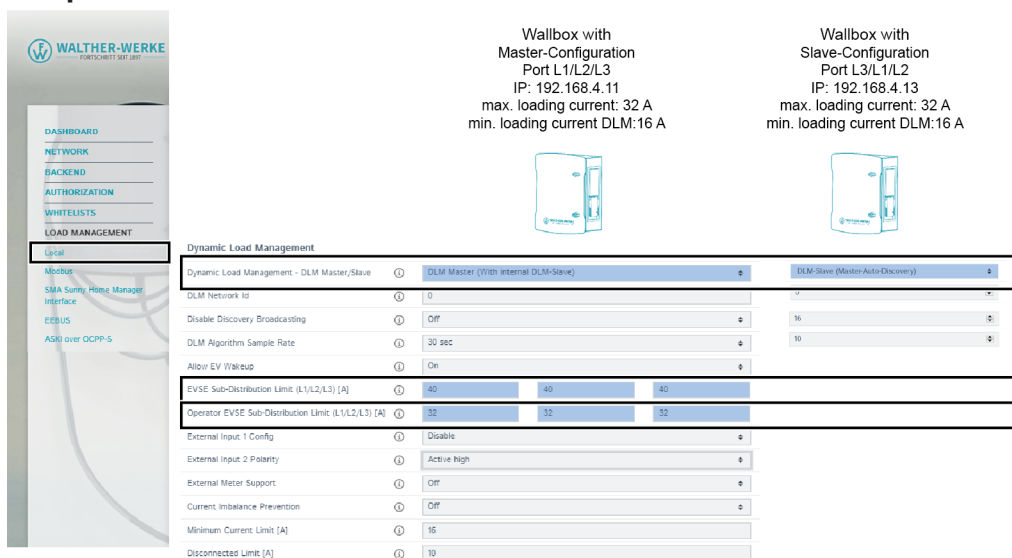
Dynamic Load Management	
Dynamic Load Management - DLM Master/Slave	DLM Master (With internal DLM-Slave) DLM-Slave (Master-Auto-Discovery)
DLM Network Id	0
Disable Discovery Broadcasting	Off
DLM Algorithm Sample Rate	30 sec
Allow EV Wakeup	On
EVSE Sub-Distribution Limit (L1/L2/L3) [A]	40 40 40
Operator EVSE Sub-Distribution Limit (L1/L2/L3) [A]	32 32 32
External Input 1 Config	Disable
External Input 2 Polarity	Active High
External Meter Support	Off
Current Imbalance Prevention	Off
Minimum Current Limit [A]	16
Disconnected Limit [A]	10

- ▶ Select the entry [Load Management] in the navigation area.
- ▶ Under [Load Management], select the entry [Local].

The following parameters are set under [Local], for example:

- Dynamic Load Management - DLM Master/Slave
- [Set Charger Subdistribution Current Limit (L1/L2/L3) [A]]
- [Set Operator Subdistribution Current Limit (L1/L2/L3) [A]]

5.4 Set power limit



Wallbox with Master-Configuration
Port L1/L2/L3
IP: 192.168.4.11
max. loading current: 32 A
min. loading current DLM: 16 A

Wallbox with Slave-Configuration
Port L3/L1/L2
IP: 192.168.4.13
max. loading current: 32 A
min. loading current DLM: 16 A

Dynamic Load Management	
Dynamic Load Management - DLM Master/Slave	DLM Master (With internal DLM-Slave) DLM-Slave (Master-Auto-Discovery)
DLM Network Id	0
Disable Discovery Broadcasting	Off
DLM Algorithm Sample Rate	30 sec
Allow EV Wakeup	On
EVSE Sub-Distribution Limit (L1/L2/L3) [A]	40 40 40
Operator EVSE Sub-Distribution Limit (L1/L2/L3) [A]	32 32 32
External Input 1 Config	Disable
External Input 2 Polarity	Active High
External Meter Support	Off
Current Imbalance Prevention	Off
Minimum Current Limit [A]	16
Disconnected Limit [A]	10

- ▶ Select the entry [Load Management] in the navigation area.
- ▶ Under [Load Management], select the entry [Local].

Under [Local], the power limit can be set with the parameter [Operator Current Limit [A]].
The recommended minimum charging current is 6 A.



Further configuration options for the charge controller can be found at the following URL:
<https://office.elinc.de/doku.php?id=start>

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Ferdinand Walther GmbH
Ramsener Str. 6
DE-67304 Eisenberg
www.walther-werke.de