

Smartmeter

eCB1-LR

Configuration instructions



Contact details

manufacturer:	eCHARGE Hardy Barth GmbH Leinbergstraße 14 92262 Birgland-Schwend telephone: +49 9666 188 00 0 telefax: +49 9666 188 00 31 web: www.echarge.de mail: support@echarge.de
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Contents

Contact details.....	2
General information about the eCB1.....	4
Note.....	4
Meaning of the LED states.....	4
Reset funktion.....	4
Setup of direct LAN connection to the eCB1.....	5
Connecting the BUS-connection between wallbox and eCB1.....	7
Configuration of the eCB1 LR MP+ (metering point).....	8
Open the Webinterface.....	8
Language and region.....	9
Date and time.....	9
Network settings.....	10
Internal.....	11
Charge connector 1.....	12
Finish Setup.....	13
Explanation of the web interface (PV load control).....	14
Configuration of the eCB1 LR PV (PV load control).....	15
Language and region.....	15
Date and time.....	16
Network settings.....	17
House connection.....	18
Charge connector 1.....	20
Setup completion.....	21
Firmware-Update.....	23
Important settings for operation.....	24
Charge-Log.....	28
Warranty / Guarantee.....	30
Guarantee specifications and warranty.....	30

General information about the eCB1

Note

To prevent confusion between the different models, please refer to the version of the device marked on the packaging. The installation and configuration should be carried out in the specified order.

Meaning of the LED states

Status-LED

- permanent green
- Slowly flashing in green
- Quickly flashing in green
- glowing or flashing in red or orange

The eCB1 is ready for operation.

The device starts.

A firmware update is running.

An error occurred.

Network-LED

- Off
- permanent green
- green flashing

no connection

connection active

network activity

Bus-LED

- Off
- green
- orange
- red

device is not configured

connection is ok

no device detected

BUS error



Reset funktion

You can reset the eCB1 to network settings or simply restart the device by pressing the reset button. The time period of pressure applied is important.

Reset to factory settings

With a pointy object, press the **reset button** for 4 to 10 seconds.

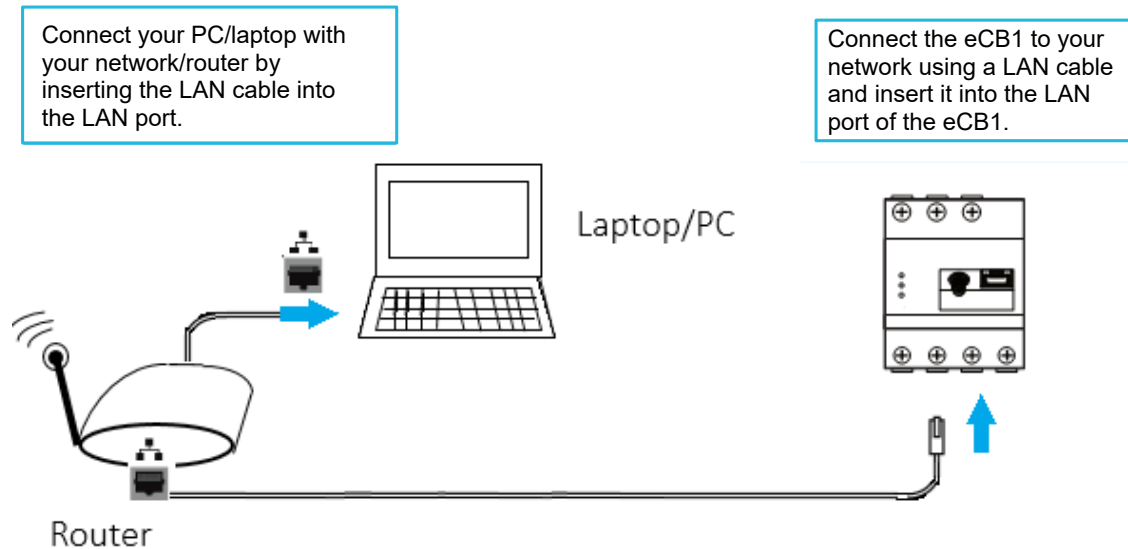
Restart the eCB1

To restart, use a pointy object to press the **reset button** for 1 to 3 seconds.

Setup of direct LAN connection to the eCB1

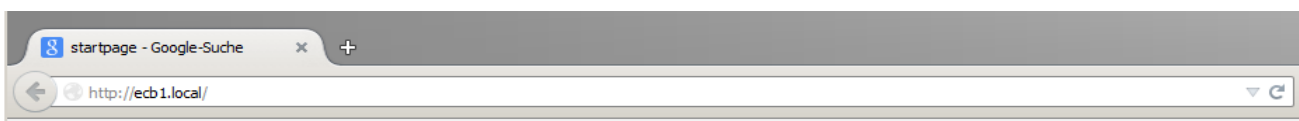
Step 1: Install the eCB1 and connect it to the power supply.

Step 2: Connect the eCB1 to your network, a PC or laptop using a LAN cable (see diagram).

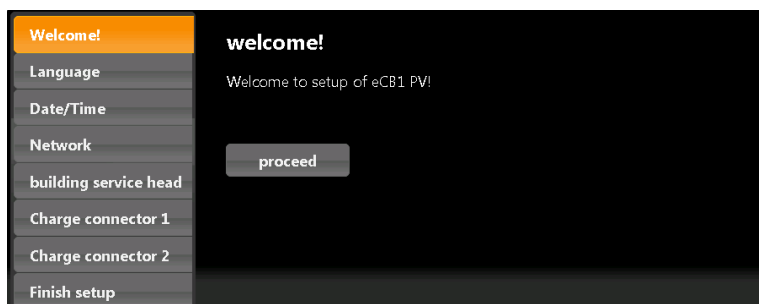


Please note: Make sure that only one unconfigured eCB1 is connected in your network to avoid name collisions.

1. Start your browser
2. Type in the following URL „<http://ecb1.local/>“ (see image below).



→ The user interface of the eCB1 opens.



If the user interface does not open, please check the following points:

1. Name resolution does not work

Access the user interface using the current IP address of the eCB1.

„(http://<IP>/)“

To do this, call up the router's user interface and read the IP address of the eCB1 (see manual of your router).

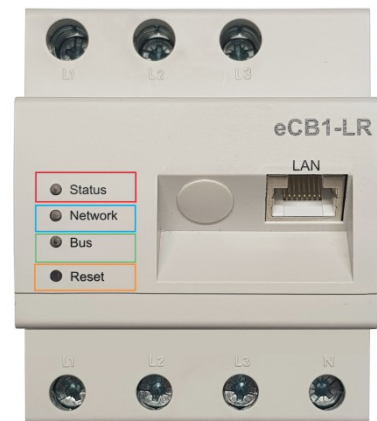
If you have Windows XP/7/8: install Apple Bonjour® . You can find the download link on www.apple.com. Then enter the URL again.

Note: Apple Bonjour® is also included in Apple iTunes®.
Alternatively contact the network administrator.

2. The status LED does not glow

If the **status LED** of the eCB1 does not glow, it means that the smartmeter is not provided with any power.

Please make sure that at least one of the phase conductors L1 and the neutral conductor N are connected to the eCB1.



3. The status LED glows or blinks red

If the **status LED** glows or blinks red, an error has occurred.

Please restart the eCB1 by pressing the **reset button** with a pointy object **for about 1 to 3 seconds**.

4. The Network-LED does not glow

If the **network-LED** does not glow, the network cable is not properly/correctly connected to the network port. Please make sure that you have inserted both ends of the cable properly and correctly.

5. eCB1 could not be found in the network

In this case the eCB1 is not located in the same local network. Please connect the eCB1 with the same Router/Switch as the one of your PC's/laptop's.

If that does not solve your problem, please reset the eCB1 to its factory settings by pressing the **reset button** with a pointy object **for about 4 to 10 seconds**.

Connecting the BUS-connection between wallbox and eCB1

Image 1: shows the BUS-clamps of the cPμ1.

Image 2: shows the BUS-clamps of the eCB1.

Please note the green marks in image 1

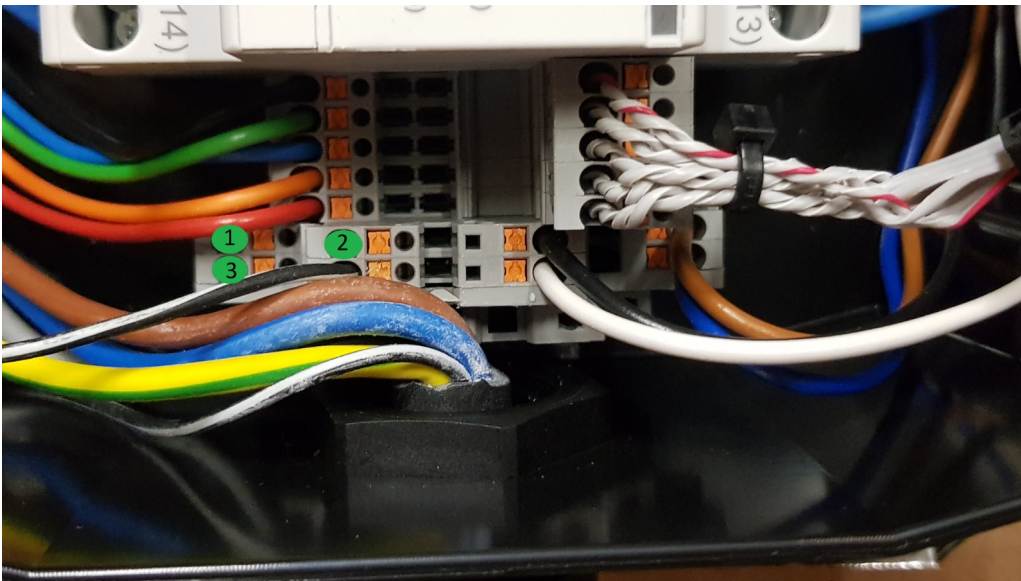


Image 1

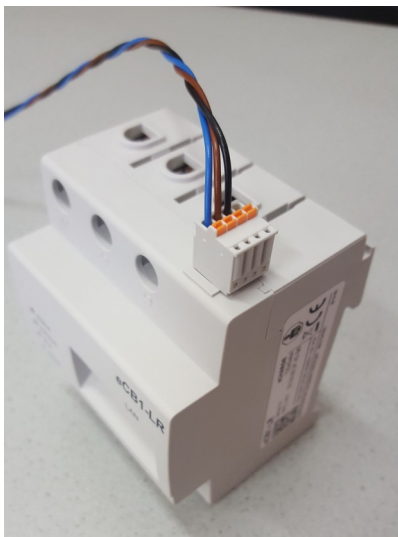


Image 2

These have to be connected as follows:

- Plug the **brown wire** (second slot on the eCB1) in „1“.
- Plug the **black wire** (third slot on the eCB1) in „2“.
- Plug the **blue wire** (first slot on the eCB1) in „3“.

Configuration of the eCB1 LR MP+ (metering point)

Open the Webinterface

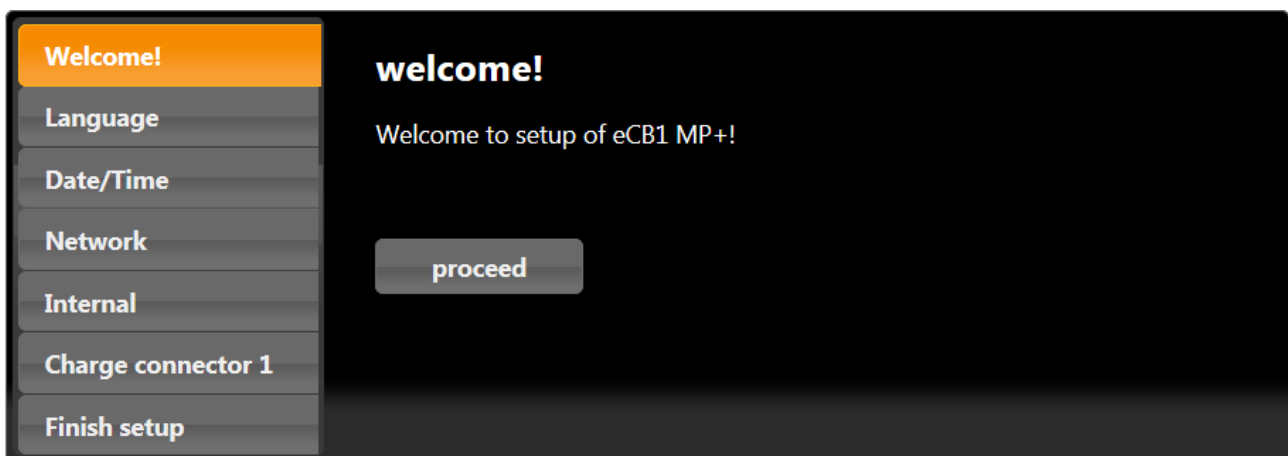
Open the Webinterface of the eCB1 MP+ (metering point at the house connection) by entering its IP address in your webbrowser.

Prior to that, it has to be integrated into the network of the house. Then through the interface of the router, you can find the IP address of all eCB1, including this one.

If there is no other configured eCB1 in your Network you can contact the eCB1 MP+ with <http://ecb1.local> for first configuration.

If the Domain Name System does not work you can find the IP address through the Webinterface of your router.

The following page should open up:



Please click “**proceed**” to get to the following section:

Language and region

Here you can set:

- the language,
- the country in which you are installing the charging station and
- the time zone

Language and region setup screen. The left sidebar contains a menu with the following items: Welcome!, **Language**, Date/Time, Network, Internal, Charge connector 1, and Finish setup. The main area displays three configuration options: Language (English), Country (Germany), and Time zone (Europe/Berlin). At the bottom, there are two buttons: back and proceed.

Date and time

Click “**proceed**” to get the following screen:

Date and time setup screen. The left sidebar contains a menu with the following items: Welcome!, Language, **Date/Time**, Network, Internal, Charge connector 1, and Finish setup. The main area displays two configuration sections: **date and time** and **time server**. The **date and time** section includes input fields for date (01.04.2020) and time (12:19:36), a set time button, and a clock icon. The **time server** section includes input fields for NTP server 1 (0.openwrt.pool.ntp.org) and NTP server 2 (1.openwrt.pool.ntp.org), a checkbox for automatic synchronise at boot, and a set time by ntp button. At the bottom, there are two buttons: back and proceed.

Here you can set the time and date manually or automatically.

Manual setting

Click on the **date button** and select the desired date from the calendar. Then click the **time button** and enter the current time.

Please separate the hours, minutes and seconds with colons.
To complete the settings, press “**Set time**” and the settings will be saved.

Automatic setting

In this case “Date” and “Time” do not need any entries.
There are pre-set internet pages in section “**NTP Server 1**” and “**NTP Server 2**”. These will connect you automatically with a time server.

Click on “**Set time by ntp**” to save your settings.
If you want to connect with a different, or your own time server, please enter the internet address manually.

By clicking “**automatic synchronise at boot**”, the time will be synchronised automatically after every outage (power, network, etc.).

After completion of the time and date settings, click on “**proceed**” to get to the next section.

Network settings

If you choose “**DHCP**” as protocol:

Your DHCP-Server (e. g. router) will do further settings automatically and fill the remaining blank spaces.

There are no other settings to be made in the section except selecting a **hostname**.
Please select a distinct host name.

The device should respond to the given hostnamen (givenname.local). Upon delivery the hostname given is „**ecb1.local**“.

The screenshot displays a network configuration screen. On the left, a vertical menu contains options: 'Welcome!', 'Language', 'Date/Time', 'Network' (which is highlighted with an orange background), 'Internal', 'Charge connector 1', and 'Finish setup'. The main panel on the right is titled 'Protocol' and contains several input fields: 'Protocol' (set to 'dhcp'), 'IP address' (127.0.0.1), 'Subnet mask' (255.0.0.0), 'Default gateway' (0.0.0.0), 'DNS server 1' (0.0.0.0), 'DNS server 2' (empty), and 'Hostname' (ecb1). At the bottom right of the main panel are two buttons: 'back' and 'proceed'.

If you select „**static**“ for protocol:

You have to enter the network settings manually. Contact your network configurator to fill in the corresponding fields in a network-compatible manner.

The screenshot shows the 'Network' configuration screen. On the left is a sidebar menu with options: Welcome!, Language, Date/Time, **Network** (highlighted in orange), Internal, Charge connector 1, and Finish setup. The main area contains the following fields: Protocol (dropdown menu set to 'static'), IP address (text box with '127.0.0.1'), Subnet mask (text box with '255.0.0.0'), Default gateway (text box with '0.0.0.0'), DNS server 1 (text box with '0.0.0.0'), DNS server 2 (empty text box), and Hostname (text box with 'eCB1'). At the bottom are 'back' and 'proceed' buttons.


Internal

The screenshot shows the 'Internal' configuration screen. The sidebar menu on the left has 'Internal' highlighted in orange. The main area is titled 'peripherie/devices' and contains a section for 'this eCB1' which is further divided into 'measuring point' and a configuration area. The configuration area includes: 'name' (text box with 'house connection'), 'device function / location of installation' (dropdown menu set to 'building service head'), 'serial' (text box with '73808751'), and a checkbox labeled 'measurement via current transformer' which is currently unchecked. At the bottom are 'back' and 'proceed' buttons.

In this section you will determine the function of the eCB1. As you are configuring an eCB1 metering point that is installed at the house connection please choose the device function „**building service head**“.

You can name the eCB1 MP+ “**house_connection_eCB1**” to prevent confusing it with other installed eCB1.

The button “measurement via current transformer” must only be activated when there is a measuring transformer installed. Press on the button to activate (orange) and deactivate (grey). Usually (by German law) a measuring transformer is required when the house connection exceeds 63A.

measuring point	1255379
	 measurement via current transformer
	ratio primary
	200
	ratio secondary
	5

Charge connector 1

In this case, the eCB1 LR MP+ is responsible for the measurement at the house connection and does not require a charging point. The charging point is not controlled.

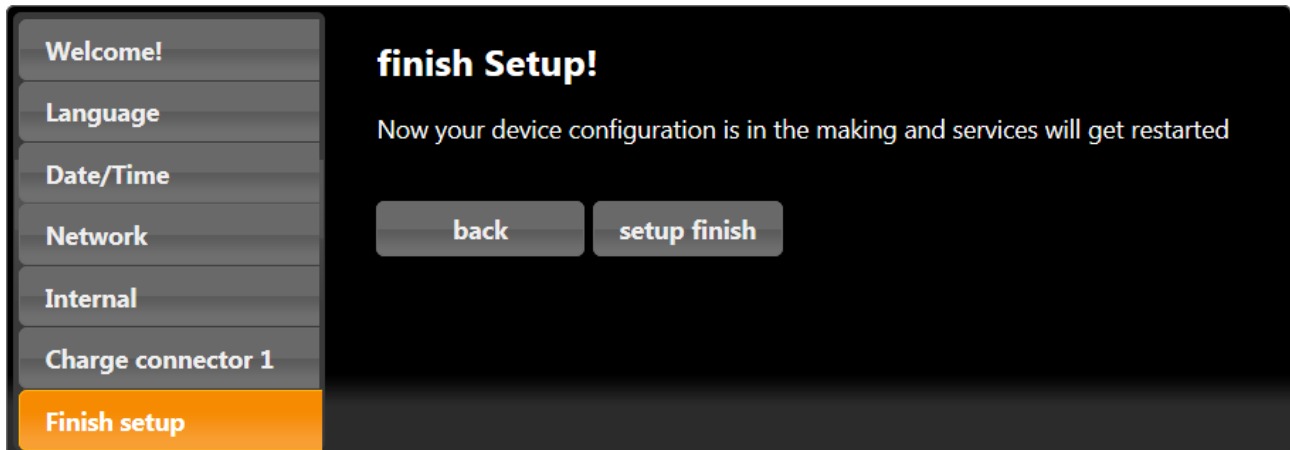
Choose „No EVCC“ (EVCC = charge controller).

Welcome!	peripherie/devices charge connector 1 <table border="1"> <tr> <td rowspan="2">electric vehicle charge controller</td> <td>device type / vendor</td> </tr> <tr> <td>No EVCC</td> </tr> </table>	electric vehicle charge controller	device type / vendor	No EVCC
electric vehicle charge controller			device type / vendor	
		No EVCC		
Language				
Date/Time				
Network				
Internal				
Charge connector 1	<div>back</div> <div>proceed</div>			
Finish setup				

Press „**proceed**“ to finish the setup.

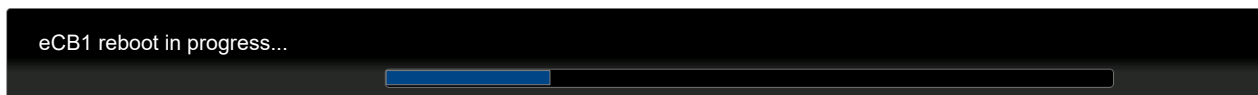
Finish Setup

Click on the button „**finish Setup**“.



After finishing the setup, the device restarts to save all the settings.

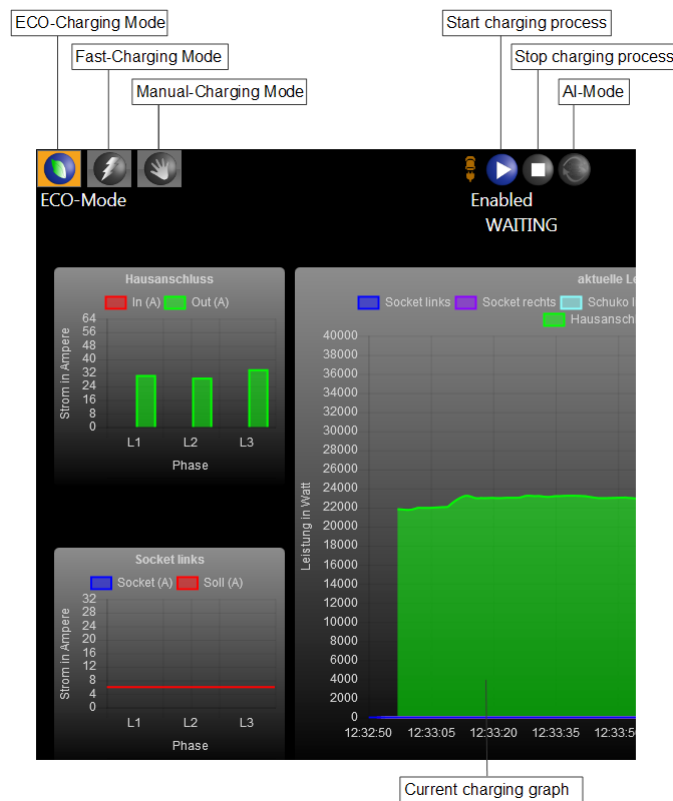
The web interface will open automatically after the restart.



Should no interface appear after five minutes, please refresh the page or enter the IP-address again.

The setup finish ends the configuration process of the eCB1 LR MP+ and you can start to configure the other eCB1.

Explanation of the web interface (PV load control)



ECO-Charging

Ensures minimum charge through a PV-System and/or with power from the power supply net if needed. Purchase of energy from power supply net is only the case if AI-Mode is deactivated.

AI-mode

Only available if ECO-Charge Mode is activated (button will be marked in orange). In AI-Mode the charging process will automatically start in case of surplus PV-power or turn off when there is too little PV-power. For this, section „Eco Min-Max Ampere“ in the later configuration is the most important setting.

Fast charging

Charge with maximum capacity of the charging station.

Manual charging

Set the charging power manually.

Start charging

Start the charging process.

Stop charging

Stop the charging process.

Current charging graph

Shows the current power output at the house connection as well as single power graphs of the charger connection.

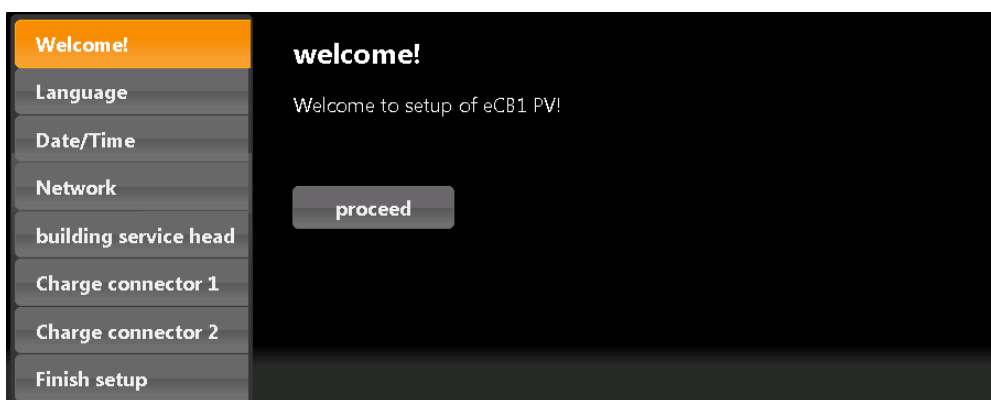
Configuration of the eCB1 LR PV (PV load control)

Open the Webinterface of the eCB1 MP+ by entering its IP address in your webbrowser.

If there is no other configured eCB1 in your network you can contact the eCB1 MP+ with <http://ecb1.local> for first configuration.

If the Domain Name System does not work you can find the IP address through the Webinterface of your router.

The following page should open up:

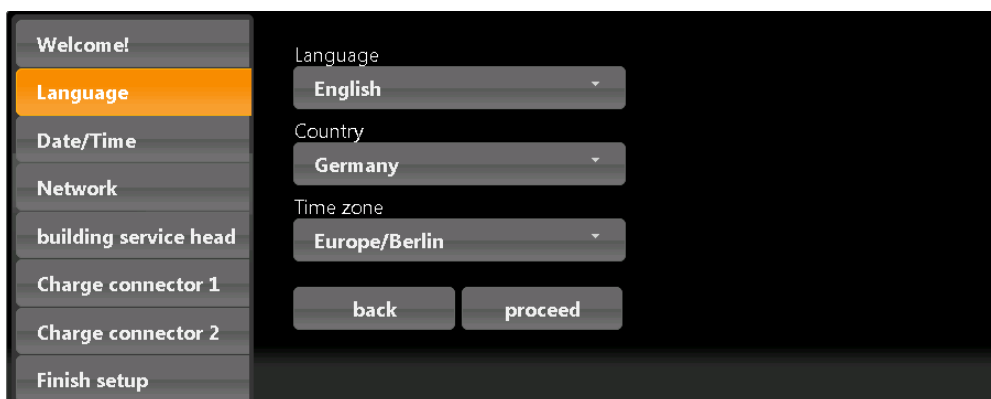


Click **“Proceed”** to get to the following selection:

Language and region

Here you can set:

- the language
- the country in which you are installing the charging station and
- the time zone



Date and time

Click “**proceed**” to get the following screen:

The screenshot shows a configuration interface for date and time. On the left is a vertical menu with options: Welcome!, Language, **Date/Time**, Network, building service head, Charge connector 1, Charge connector 2, and Finish setup. The main content area is titled 'date and time' and contains a 'date' field with the value '31.05.2019', a 'time' field with '15:33:26', and a 'set time' button. To the right of these fields is a small analog clock. Below the 'date and time' section is a 'time server' section with 'NTP server 1' (0.openwrt.pool.ntp.org) and 'NTP server 2' (1.openwrt.pool.ntp.org) fields. There is a checkbox for 'automatic synchronise at boot' and a 'set time by ntp' button. At the bottom are 'back' and 'proceed' buttons.

Here you can either set the date and time manually or have it set automatically.

Manual setting

Click on the **Date** button and choose the current date. Then continue with the **Time** button to enter the current time.

Please separate the hours, minutes and seconds with colons.

To complete the settings, press “**Set time**” and the settings will be saved.

Automatic setting

In this case “**Date**” and “**Time**” do not need any entries.

There are pre-set internet pages in section “**NTP Server 1**” and “**NTP Server 2**”. These will connect you automatically with a time server.

Click on “**Set time by ntp**” to save your settings. If you want to connect with a different, or your own time server, please enter the internet address manually.

By clicking “**automatic synchronise at boot**”, the time will be synchronised automatically after every interruption (power, network etc.).

Network settings

After completion of the time and date settings, click **“proceed”** to get to the next section.

If you choose **“DHCP”** as protocol.

Your DHCP-Server (e. g. router) will do further settings automatically and fill the remaining blank spaces.

There are no other settings to be made in the section except selecting a **hostname**. Please select a distinct host name.

The device should respond to the given hostnamen (givenname.local). Upon delivery the hostname given is **„ecb1.local“**.

The screenshot shows the 'Network' settings screen. On the left is a vertical menu with options: 'Welcome!', 'Language', 'Date/Time', 'Network' (highlighted in orange), 'building service head', 'Charge connector 1', 'Charge connector 2', and 'Finish setup'. The main area on the right contains the following fields: 'Protocol' (dropdown menu set to 'dhcp'), 'IP address' (192.168.88.1), 'Subnet mask' (255.255.0.0), 'Default gateway' (192.168.1.254), 'DNS server 1' (192.168.1.254), 'DNS server 2' (empty), and 'Hostname' (ecb1). At the bottom are 'back' and 'proceed' buttons.

The screenshot shows the 'Network' settings screen with the 'Protocol' dropdown menu set to 'static'. The other fields are identical to the previous screenshot: 'IP address' (192.168.88.1), 'Subnet mask' (255.255.0.0), 'Default gateway' (192.168.1.254), 'DNS server 1' (192.168.1.254), 'DNS server 2' (empty), and 'Hostname' (ecb1). The 'back' and 'proceed' buttons are at the bottom.

If you select **„static“** for protocol

You have to enter the network settings manually. Contact your network configurator to fill in the corresponding fields in a network-compatible manner.

House connection

Please click “**proceed**” to get to the following section:

In this case: A Fronius smartmeter is already installed on the house connection, which can be read out via the Fronius inverter.

Measurement via current transformer

Activate “**measurement via current transformer**” only if this eCB1 is installed at the house connection and only if a current transformer is installed. This is required for a house connection larger than 63A.

If an **eCB1 LR MP+** has already been installed and this setting has already been chosen for the first device during the earlier described configuration process (see page 12), it is not necessary to activate it again.

Selection variants device type/manufacture

eCB1 (internal)	an eCB1-LR PV is installed at the house connection
another eCB1	an eCB1-LR MP+ is installed at the house connection
B-control Energy Manager	a B-Control Energy Manager (EM 100, EM 210, EM 300) is installed at the house connection
SMA Energy Meter	a SMA Energy Meter or a Home Manager 2.0 is installed at the house connection
Fronius measuring point	a Fronius smartmeter is installed which can be read via the Fronius inverter.
Kostal measuring point	a Kostal smartmeter is installed at the house connection, only in combination with Plenticore+, Piko IQ
Janitza UMG power quality analyser	a Janitza UMG network analyser is installed at the house connection
KLEFR 6934 Meter	a KLEFR Energy Meter is installed at the house connection
PHOENIX CONTACT measuring point	a Phoenix Contact measuring point is installed at the house
Passive push updated measuring point	via http Post (via API gateway) updated measuring point
No measuring point	There is no measuring point installed*

*If no device is installed at the house connection “**no measuring point**” can be chosen. Then the house connection stays deactivated and no input is saved.

Note: In this case it's not possible to enable a PV-regulated load or a house connection limit.

Click “**proceed**” to get into the next section.

Charge connector 1

peripherie/devices

charge connector 1

measuring point	device type / vendor	eCB1 (internal)
	name	Charging Socket LEFT
	serial	
	<input checked="" type="checkbox"/> measurement via current transformer	
electric vehicle charge controller	device type / vendor	PHOENIX CONTACT EVCC ...
	name	evcc1
	busid	1

back proceed

Select the device type that is installed in the charging station or the supply line to the wallbox for current measurement here.

Selection variants device type/manufacturer

eCB1 (internal)

an eCB1 PV is built in the charging station → for PV load control

KLEFR Energy Meter

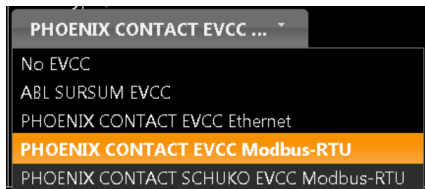
KLEFR Energy Meter is installed as measuring point in the charging station

Phoenix Contact Messpunkt

Phoenix Contact measuring point is installed in the charging station

Selection variants EVCC:

In this section you can choose between various charge controller. The system usually pre-determines the correct EVCC. Should that not be the case, please choose EVCC

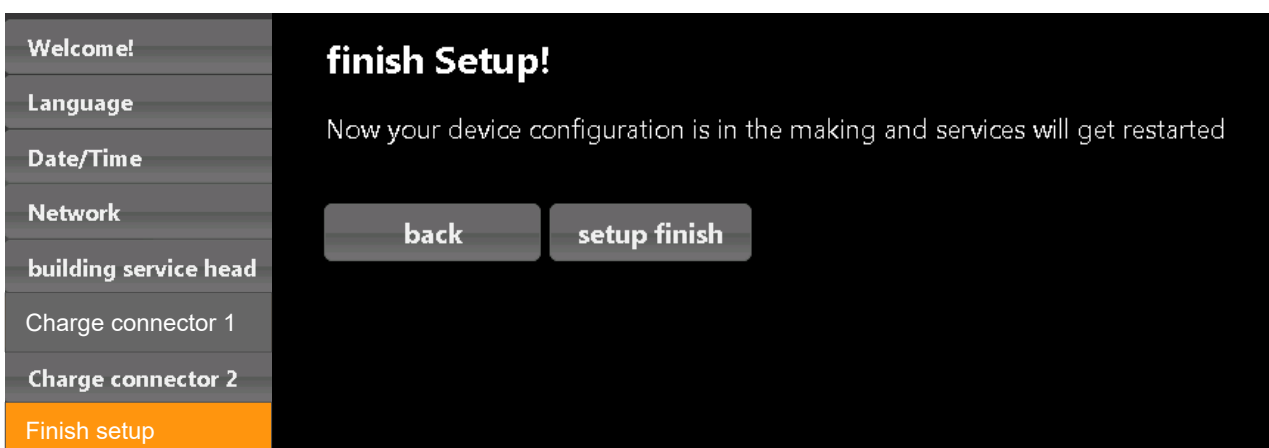


„Phoenix Contact Modbus-RTU“.

At „Bus ID“ enter the number 1 for charging point 1.
Bus ID 2 is assigned for charging point 2.

Setup completion

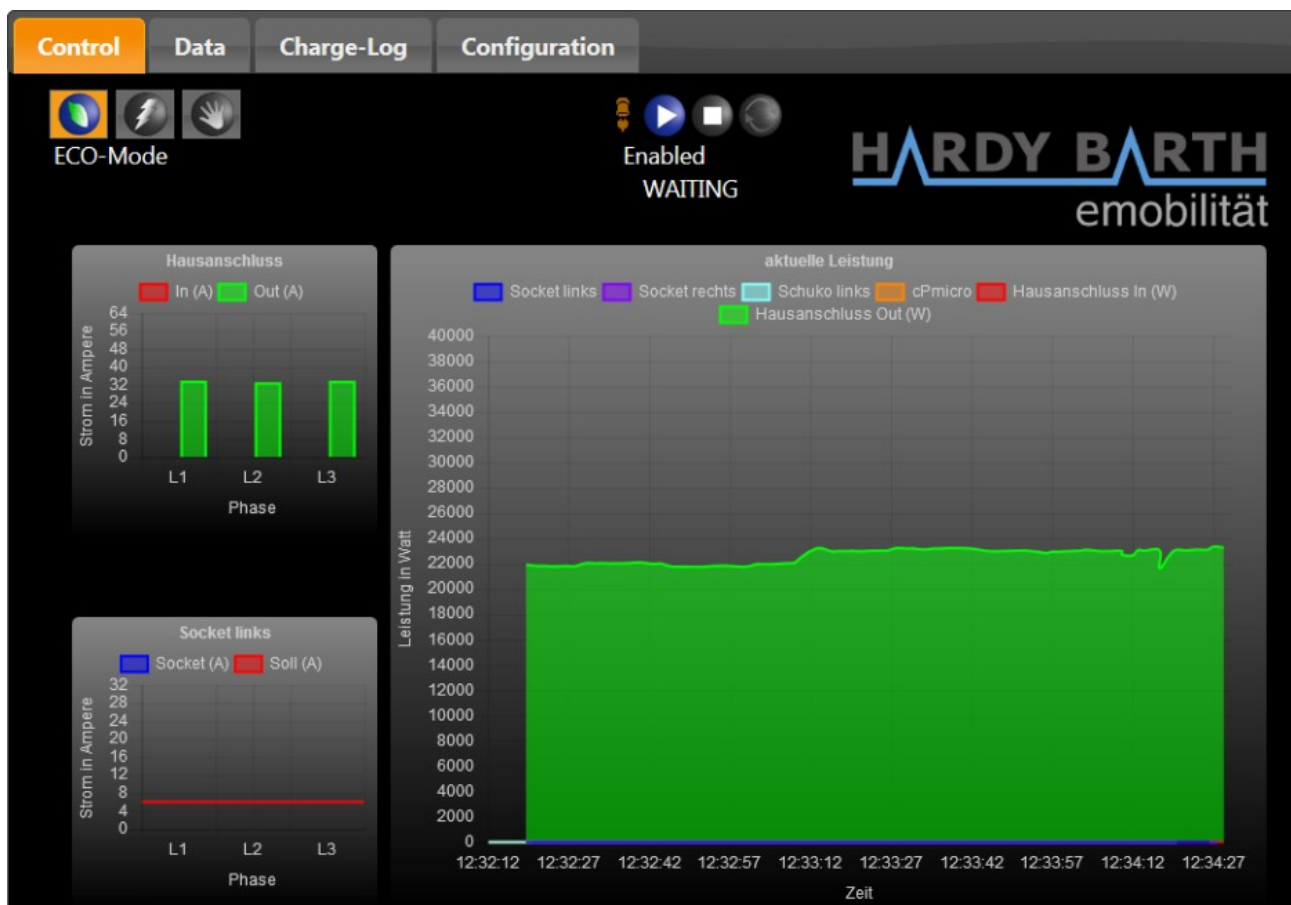
Click on the button „finish setup“.



After finishing the setup, the device restarts to save all the settings.
Should no interface appear after five minutes, please refresh the page or enter the IP-address again.



The web interface will open automatically after the restart.



In „**Configuration**“ → „**base settings**“ you can adjust the settings already made as required. You already know this display from the initial configuration.

Firmware-Update

In „Firmware-Update“ you can update the firmware.

The screenshot shows the 'Configuration' tab selected in the top navigation bar. Below it, the 'Firmware-Update' sub-tab is active. The interface includes a 'Firmware-File' section with a file selection button labeled 'Durchsuchen...' and a status message 'Keine Datei ausgewählt.'. Below this is an 'Update' button. A section titled 'factorydefaults' contains a table with four rows of settings and their corresponding actions.

factorydefaults	
devices base settings	delete
charge records	delete
network settings	reset to factory defaults
all settings and records	reset to factory defaults

We recommend an update only in case of malfunction with either the hardware or the software. Please contact the support department of eCharge Hardy Barth GmbH in order to issue a firmware update if needed.

Mail: support@echarge.de

Important settings for operation

The screenshot shows the 'Configuration' tab of the Hardy Barth eCB1 smartmeter interface. The 'Settings' sub-tab is selected. The interface includes the following elements:

- building service head:** A dropdown menu currently set to '63 A'.
- Scaling Max.-Value Power-Chart:** A slider set to '22 kW'.
- Scaling Time Span Power-Chart:** A dropdown menu set to 'one and a half minutes'.
- Scaling Max.-Value Amp-Charts:** Two radio buttons, '16 A' (unselected) and '32 A' (selected).
- Eco-Min-Max Ampere:** A slider ranging from 6 to 32 Ampere.
- Ref.-Value Eco-Mode:** A slider set to '0 Watt'.
- Logmode:** Three radio buttons: 'Off' (selected), 'Chargings', and 'Charge-Graph'.
- Access for HTTP Authentication:**
 - Username:** An empty text input field.
 - Password:** An empty text input field with a 'show Password' button next to it.
 - Password Confirmation:** An empty text input field.
 - Apply:** A button to save the changes.

In order to guarantee the best operation possible according to your own infrastructure, several important settings are required in this section. Those are saved automatically and are active immediately.

1) Building service head

Choose the maximum value of your house connection.

If your house connection exceeds 63 A, the installation of a transducer is obligatory. Please contact professional staff for further information regarding the transducer

2) Scaling max.- value power PV-Chart 22 kW

Settings here only impact the diagram on the first page.

Choose the value according to the maximum charging capacity of your electric vehicle.

Set the value by dragging the controller to the left or to the right.

The effects of this adjustment are visible on the surface "control".

3) Scaling Time Span Power-Chart

Settings here only affect the display or scaling of the graph. By changing this value you change the time in which the real charge is displayed. (e.g. one and a half minutes) The effects of this setting are visible on the "control" interface.

3) Scaling Time Span Power-Chart

Here you change the maximum ampere value to be displayed in the graph. The effects of this setting are visible on the "Control" interface.

5) Eco-min-max-ampere 6-32 ampere

These settings depend on your electrical vehicle. There are vehicles that require minimum charging power of 8 or 10 A (or higher).

Should the **ECO-Charging Mode** be activated and the surplus power (= solar produced energy – energy consumption at house connection) be lower than the required minimum charging power, the car will continue charging. It will get the remaining power needed (to fill up the balance until the required minimum charging power) from the grid.

6) Ref. Value ECO-Mode 0 Watt

Settings in this section determine how much energy is allowed to be drawn from the grid to charge your Electric Vehicle. If value "0 Watt" is set, no additional purchasing from the grid is allowed.

Should there be a solar battery, there could be interference in charging your car, e.g. power supply from grid and/or power supply from solar battery. In order to avoid that, setting the value of "500 W" is the most suitable.

7) Logmode

Off No visualization of each charging process.

Chargings: Tabular visualization of each charging process.

Charge-Graph: Tabular visualization, including graphic charts of each charging process.

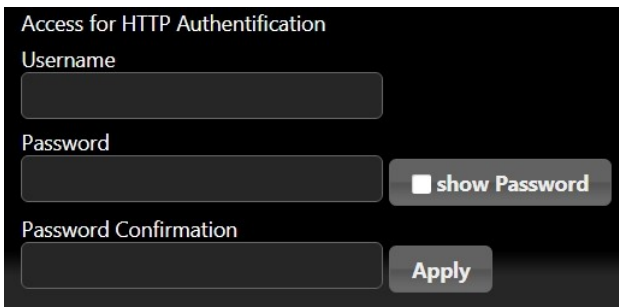
8) Access for HTTP Authentication

You can set an username and a password to protect your system from unauthorized access and changes. Please make sure to note down the username or password in order to be able to access the system later on.

Requirements for the setup:

username: 3 – 30 letters

password: 8 – 255 letters



Access for HTTP Authentication

Username

Password

Password Confirmation

Deleting username and password

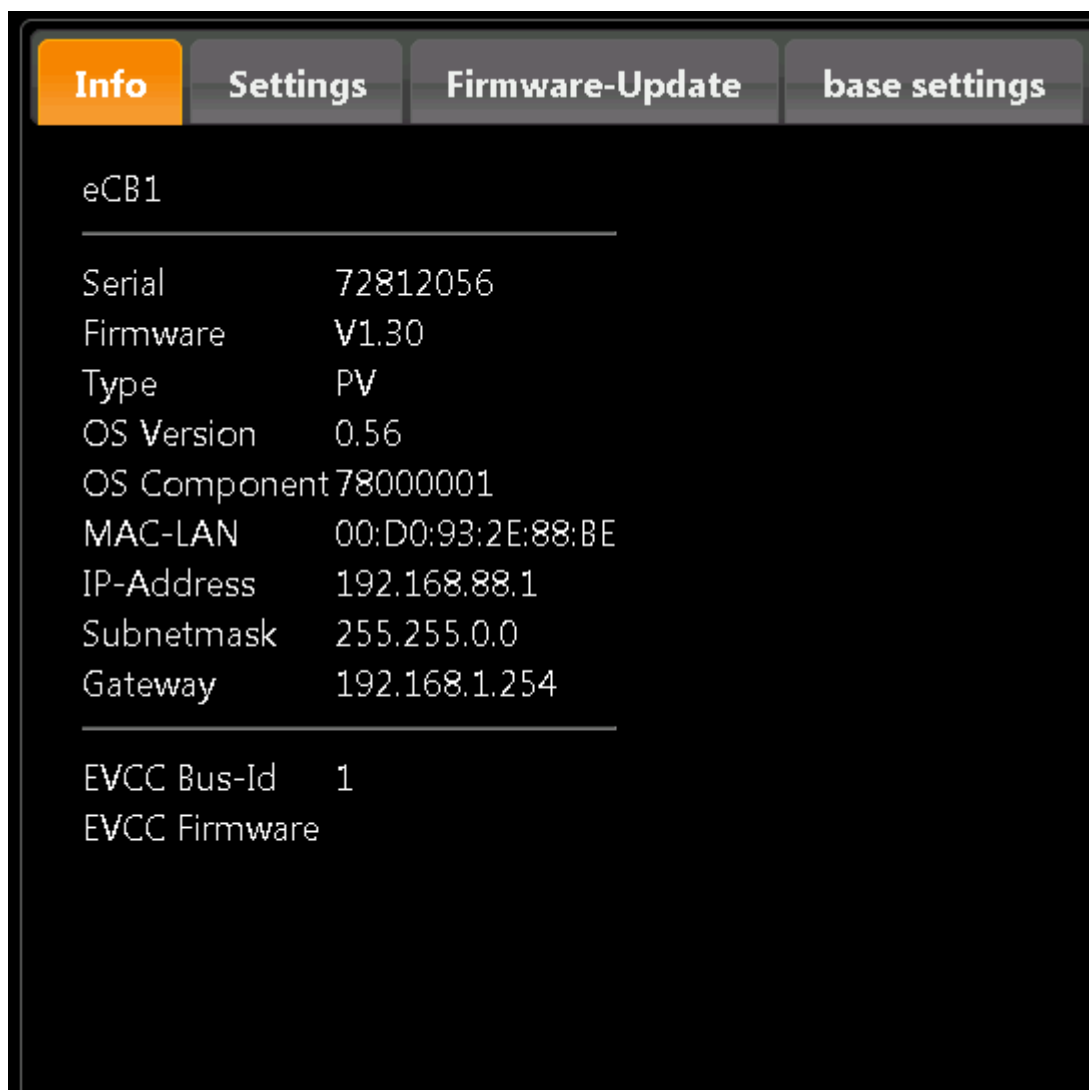
1. Open the webinterface and log in
2. Go to Configuration → Settings
3. Delete the username and the password
4. Press Apply.

Changing username and password

1. Open the webinterface and log in
2. Delete current username and password
3. Set a new username and a new password
4. Press Apply.

Infos

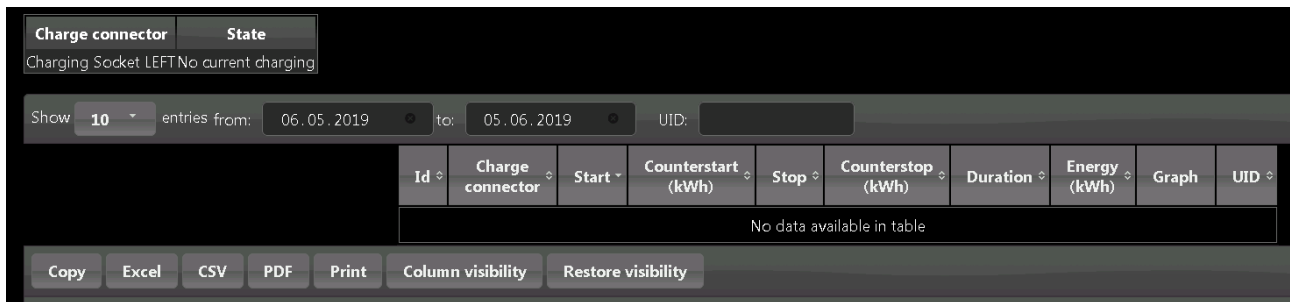
In section „**info**“ you can read internal data and network settings of the eCB1.



Charge-Log



Under the tab "Charge-Log" you can see the current status of all your charging points:



The status of the charging connection changes during charging from **"Currently no charge"** to e.g. **"Charging for 1 minute, 0.8kWh"**.

You can also read your load data, hide and show columns, print your load data and convert it into various file formats.

Kopieren	Copy single charging processes
Excel	Export the charging process data into Excel-file.
CSV	Export the charging process data into CSV-file.
PDF	Export the charging process data into PDF-file.
Drucken	Print directly
Spalten ausblenden	Hide single columns.
alle Spalten anzeigen	Restore visible settings.

Visualization of graphic table in tabular form

The section “**Data**” lists up the values from the graph. (Here: Example with photovoltaic system, solarbattery, cPμ1T13.8 and Fronius ohmpilot)

Control	Data	Charge-Log	Configuration
House connection	Energy	-846.9 W	
	Counter	7886.17 kWh	
	L1	9.88 A	
	L2	11.04 A	
	L3	9.01 A	
Battery	Name	fronius-hybrid	
	Charge State	11.5 %	
	State	sustaining(6)	
	Power	0.0 W	
OhmPilot	Power	0.0 W	
cPμ1T13.8	Energy	-5.5 W	
	Counter	2050.51 kWh	
	L1	0.03 A	
	L2	0.00 A	
	L3	0.00 A	
EVCC	State	17	
	PWM	0	

House connection	Energy	846,9 W is drawn from the grid.
	Counter	7886,17 kWh was drawn in total.
	L1, L2, L3	Current flow in the individual phases
Batterie		The charge state of the battery, charging and Discharging is shown.
Ohmpilot		The power consumption is displayed. Only possible in combination with the Fronius Hybrid-Series.
cPμ1 T13.8	Energy	Power consumption of 5,5 W
	Counter	The cPμ1 drew 2050,51 W in total.
	L1, L2, L3	Current flow in the individual phases
EVCC		Internal data

Warranty / Guarantee

Guarantee specifications and warranty

[eCHARGE Hardy Barth GmbH](#) guarantees the legally prescribed warranty period of 24 month for the present product as well as a warranty of the same duration for the country in which the product was purchsaed.

If the product is operated in another country, the legal provisions for the country in which the product was purchased applys. The warranty, like the guarantee, is not transferable under any circumstances.

Should modifications of any kind have been made to the product that have not been explicitly authorized by [eCHARGE Hardy Barth GmbH](#) or have been described in the guidelines of authorized service partners, the manufacturer's warranty obligations become void with immediate effect.

Exclusion of claims for damages and liability

This includes claims which are attributable to the following causes:

1. Deterioration due to normal wear and tear, corrsion, damage, accident, incorrect storage or operation, lack of reasonable and necessary maintance.
2. Wallbox installation services carried out by unauthorised persons (by an unauthorised electrician), installers not auhorised by [eCHARGE Hardy Barth GmbH](#) or the customer himself.
3. Repairs or interventions carried out by unauthorised persons, companies or by the customer himself to remedy defects in the wallbox.
4. Use of spare parts that are not original spare parts from [eCHARGE Hardy Barth GmbH](#).
5. Incorrect maintenance and/or use due to non-observance or non-compliance of the operting instructions.
6. Acceptance of further damage to the device and its surroundings, e.g. by continued use of the device after the defect/disturbance has been detected.
7. Damage due to mechanical overload.

The manufacturer further rejects any claims for damages due to improper use, negligence, modifications, repair attempts by unauthorized persons or force majeure .

The repair and/or the replacement of defective parts does not lead to an extension or a new start of the warranty period according to the guarantee conditions.



ATTENTION!

Should problems occur when operating your product please immediately contact your local distributor or an authorized representative to clarify whether the malfunction is covered by guarantee and/or warranty provisions.

Do not, **under any circumstances**, make alterations or repairs to your product on your own!

The company **eCHARGE Hardy Barth GmbH** guarantees the proper operation of the present product after delivery within the scope of the lawfully valid warranty.

The warranty is limited to such damage that is attributable to normal use and to obvious material or manufacturing defects.

In these cases, the manufacturer will attempt to restore the proper functioning of the product in cooperation with the local distributor.

Any costs incurred for the transport of the product shall be borne by the customer.

If the serial number has been removed from the wallbox through the fault of the customer, or if it has been altered or is illegible, all rights granted under the warranty conditions shall lapse and only the warranty period prescribed by law shall apply.

If the customer orders repair or replacement work to be carried out outside the business hours of **eCHARGE Hardy Barth GmbH**, the hourly wage and travel costs outside normal business hours (Monday – Friday, 9:00 am – 16:00 pm) will be charged to the customer according to the current price list.

Customers service for questions, complaints and objections:

on weekdays from 9 am – 12 pm / 2 pm – 4 pm

telephone: +49 9666 / 188 00 0

e-mail at support@echarge.de

Please have the serial number, the product name of the wallbox and your customer number ready!