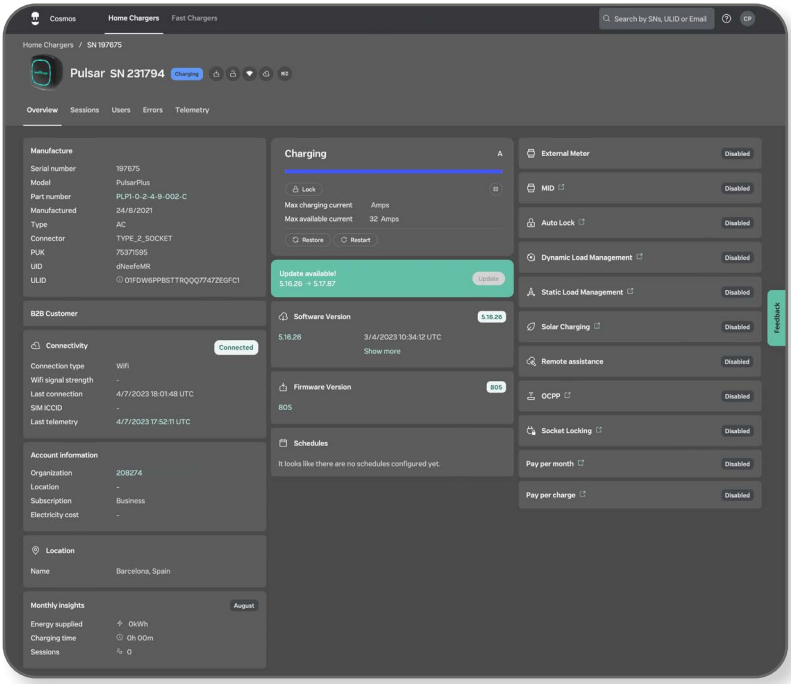
wallbox



COSMOS

Operation Guide

Contents

INTRODUCTION

Welcome to COSMOS, the portal for managing your charging infrastructure from Wallbox.

COSMOS is a web-based application that allows you to centrally display and monitor your Wallbox home and fast chargers during operation. This user guide will help you get started with COSMOS and make the most of its features.

How does COSMOS work?

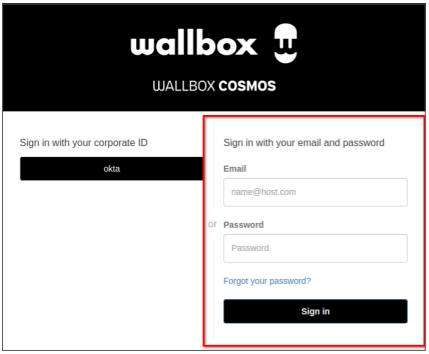
The COSMOS application is intended for CPOs and professional customers who operate a charging park or a group installation with charging stations from Wallbox. As soon as a Wallbox charging station is registered via the **Wallbox** portal/app, it is linked to our COSMOS server that surveys the charging stations and stores all related information on the Wallbox servers.

The COSMOS license model gives customers access to the information of all charging stations linked to their account. Basically, COSMOS shows the settings for the selected charger in real time and lists additional information such as the charger usage with all sessions, errors and telemetry.

As COSMOS is web-based, the customer can use their preferred web browser and operating system to access the application from any computer, tablet and/or mobile device connected to the internet.

Logging In

Once you have been granted access to Cosmos, you will receive an e-mail with your login details, including your temporary password. Please proceed as follows to log in to your COSMOS account:



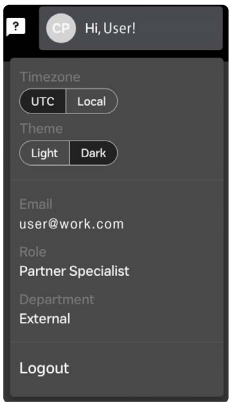
1. Open a web browser of your choice and go to the COSMOS login page: **cosmos.wallbox.com**
2. Enter your e-mail address and the temporary password provided in the e-mail.
3. Click the **Sign in** button.

⚠ **Important!**

- Please note that accounts are non-transferable to other users and must be registered under individual names.
- The Okta login is reserved for internal users only.

Changing Your Password

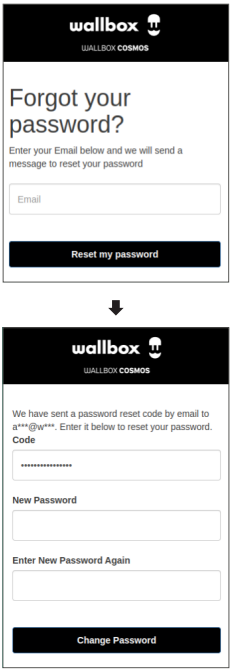
For security reasons, you must change your temporary password when you log in to COSMOS for the first time. To do this, proceed as follows:



1. After logging in, click on your profile icon or your name in the top right-hand corner of the COSMOS interface.
2. Select **Change Password**.
3. Follow the instructions to set a new password. Make sure that it meets the password requirements (e.g. length, complexity).
4. Click **Save** to confirm your new password.

Password recovery

Registered customers can recover their password by accessing the recovery form. Proceed as follows:



1. Click the **Forgot your password?** link on the **Sign In** dialog.
2. On the password recovery page, enter the e-mail address that is linked to your account.
3. Click on the **Reset my password** button to send an e-mail with a specific code to this e-mail address.
4. Enter the code and a new password.
5. Click on the **Change Password** button to complete the process.

The new password is valid from the next login.

Roles and Permissions

Access to the information displayed and to the functionality in COSMOS is managed via a role-based system. The following two user roles can be assigned.

Partner Agent

A Partner Agent has access to basic charger information and monitoring features:

- **Overview** – current status of all linked chargers (Manufacture, Connectivity, Account information, Location, Energy Cost, Connection status, Software version / update, Firmware version, Charging schedules and Payment)
- Configuration of the charger features (such as the Energy Management, Auto-Lock, Meter and OCPP)
- **Sessions** – detailed information on each charging session (Start and End times, User, Charging vehicle energy, Energy cost and Errors occurred during this session)

Partner Specialist

A Partner Specialist has access to detailed charger information such as errors and telemetry data. In addition, he is able to perform remote actions on the chargers. This includes features like:

- Initiating or stopping charging sessions
- Restarting the charger
- Restoring the charger to the factory settings
- Locking and unlocking the charger
- Remotely updating the charger
- Deleting charging schedules
- Unlink registered users from a charger

⚠ **Important!**

The role system is predefined in COSMOS and can only be changed by the administrators at Wallbox on the basis of the purchased license.

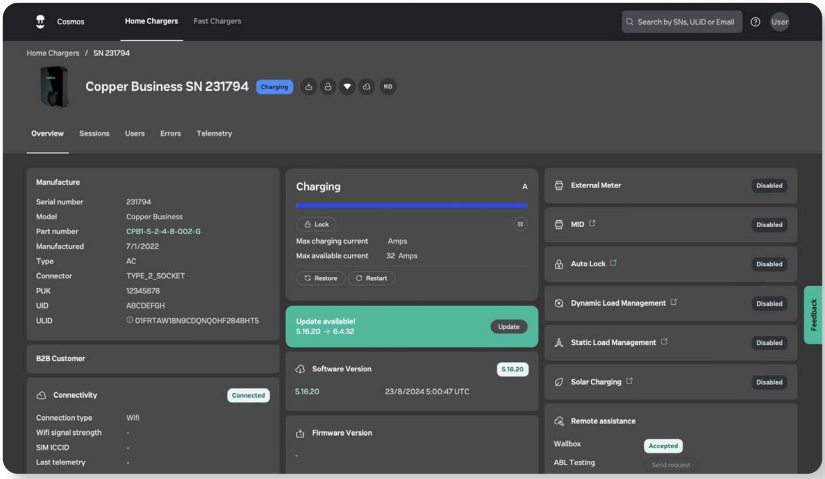
User profile

The user profile in the top right-hand corner of the COSMOS interface allows the user to adjust the following personal settings and to log out of his personal COSMOS account:

- **Timezone**
  - › **UTC**: With this option, all date and time information are based on Coordinated Universal Time (UTC).
  - › **Local**: With this option, all date and time information are based on the user's system time zone.
  - › **Charger**: With this option, all date and time information are based on the local time at the installation location of the charging station, if available.
- **Theme**
  - › **Light**: This option uses a predominantly white colour scheme.
  - › **Dark**: This option uses a colour scheme with predominantly dark shades of gray.
- **Email**: This field displays the user's e-mail address used for the COSMOS registration.
- **Role**: This field displays the role assigned to the user in the system.
- **Get support**: Clicking the [?] icon provides access to the COSMOS support via e-mail (**cosmos.support@wallbox.com**).
- **Logout**: By clicking on it, the user is logged out of the COSMOS user interface and redirected to the COSMOS login page.

CHARGER INFORMATION DETAILS

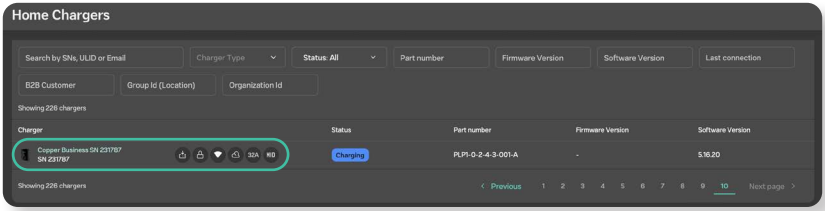
The COSMOS interface gives you access to the information of every Wallbox home charger that is connected to your account.



There are different ways to access the charger information via the home screen of the COSMOS interface.

- Click the **Home Chargers** button in the header to open an overview page with all home charger models in your account.
- Enter a serial number, a unique identifier (UID) or any linked e-mail address in the **Search by serial number, uid or email** field in the header or on the main page to open an overview for a specific (serial number or UID) or for all charger models (e-mail address) in your account.

If you have worked with COSMOS before, the 5 most recently connected charger models are displayed in the **Recent Activity** section and can be selected directly.



You can apply various filters to find the charger(s) in your account that match your search results.

- **Search by... :** Here you can enter the serial number of the charger, a valid user e-mail or the internal unique identification number (ULID) for the charger.
- **Charger Type**: Here you can select the desired Wallbox charger.
- **Status**: Here you can select and apply one or more states of the chargers connected to Cosmos.
- **Part number**: Here you can enter the indication of a specific charger type/production series.
- **Firmware Version**: Here you can enter a specific version for the charger firmware.
- **Software Version**: Here you can enter a specific version for the software installed in the chargers.
- **Last connection**: Here you can select a specific date using the internal calendar in Cosmos.

- **B2B Customer**: Here you can enter the type of subscription.
- **Group Id (Location)**: Here you can enter the ID or the name of a charging group if a group has already been created.
- **Organization Id**: Here you can enter the ID of a business unit or organization.

In addition, the displayed chargers are shown with a brief overview of the specific features and the current settings.

- **Charger**: The name of the charger specified in the **Wallbox** portal/app is displayed here together with its serial number and the status for:
  - ›  : Software up to date / update available (→ “Update & Software Version Panel *” on page 11)
  - ›  : Charger locked / unlocked (→ “Features panel *” on page 12)
  - ›  : Wifi connection active / inactive (→ “Connectivity Panel” on page 9)
  - ›  : Last connection (→ “Connectivity Panel” on page 9)
  - ›  : Maximum current setting (→ “Charging Panel *” on page 10)
  - › : Energy meter connected / disconnected (→ “Features panel *” on page 12)

- **Status**: This shows whether the charger is connected to COSMOS via the Internet (→ “Connectivity Panel” on page 9).
- **Part number**: This shows the indication of the charger type/production series (→ “Manufacture Panel” on page 9).
- **Firmware Version**: This shows the firmware version currently installed in the charger (→ “Firmware Version Panel *” on page 11).
- **Software Version**: This shows the software version currently installed in the charger (→ “Update & Software Version Panel *” on page 11).

If not all linked chargers can be displayed on the page, you can navigate to other pages by clicking on the **< Previous** and **Next page >** icons or on a specific page number below the charger list. To display the details of a specific charger, simply click on the corresponding entry in the charger list.

Home Chargers – Overview

From this page, you can access and navigate the information on the listed home chargers in your account via various panels. You can apply different filters (such as serial numbers, UID, a-mail address, charger type and others) to search the charger or chargers matching your search results.

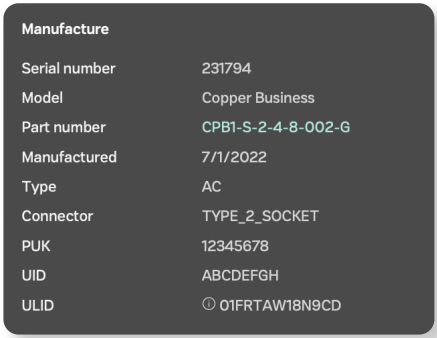
⚠ **Important!**

Depending on your current role (see “Roles and Permissions” on page 6), the information displayed for the selected charging station may be limited. Although all panels are described in the following sections, information that is not available to **Partner Agents** is marked with an asterisk.

Click on an entry in the **Charger** section to display the following information for this charger model.

Manufacture Panel

The **Manufacture** panel displays the following information.

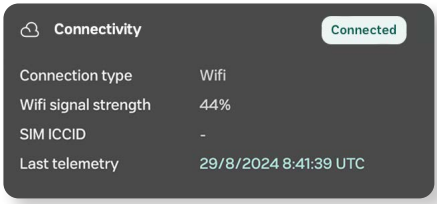


- **Serial number**: Serial number of the charger
- **Model**: Product name of the charger
- **Part number**: Part number or manufacturing number*.
- **Manufactured**: Manufacturing date of the charger
- **Type**: Type of output current (AC or DC)
- **Connector**: Type of charging connector
- **PUK**: Personal Unblocking Key - number for unlocking the charger or registering it on **Wallbox**
- **UID**: Unique identifier number for registering the charger on **Wallbox**
- **ULID**: Internal unique identifier number for any Wallbox device

* Clicking on the coloured number provides access to a filtered list of chargers with that part number.

Connectivity Panel

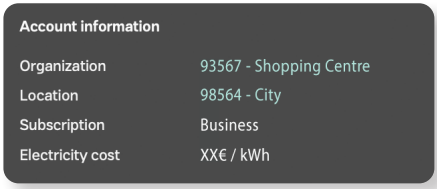
The **Connectivity** panel displays the following information.



- **Connection type**: Type of data connection, either **WIFI**, **Cellular** or **Ethernet**, if provided
- **Wifi signal strength**: Strength of the WiFi signal during the last connection in percent (only shown when connected via WiFi)
- **SIM ICCID**: Unique identifier number for the SIM card in the charger, if inserted
- **Last telemetry**: Date and time of the last telemetry data received, based on the **Timezone** format selected in the user profile

Account Information Panel

The **Account information** panel displays the following information.

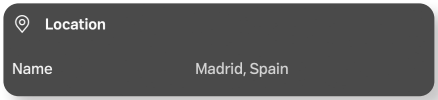


- **Organization**: Identifier and name of the organization to which the selected charger belongs*. This is set by the user in the **Wallbox** portal/app.
- **Location**: Location of the organization*, if set by the user in the **Wallbox** portal/app
- **Subscription**: Type of the **Wallbox** portal subscription purchased by the organization
- **Electricity cost**: Price per kilowatt hour, if set by the user in the **Wallbox** portal/app

* Clicking the coloured entries shows a filtered list of all chargers of this organization or at the set location.

Location Panel

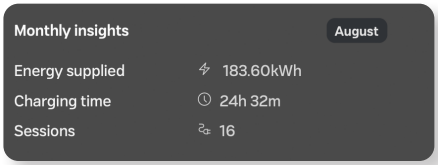
The **Location** panel displays the following information.



- **Location**: Location of the charger currently selected, if set by the user in the **Wallbox** portal/app

Monthly insights Panel

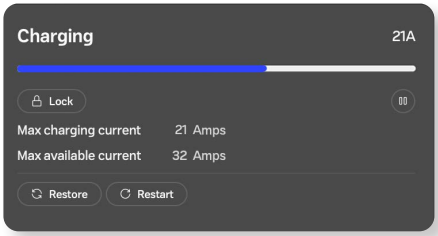
This panel shows an overview of your charging activities with the selected charger in the current month.



- **Energy supplied**: Total energy for your charging activities
- **Charging time**: Total duration of charging sessions (hours and minutes)
- **Sessions**: Total number of charging sessions

Charging Panel *

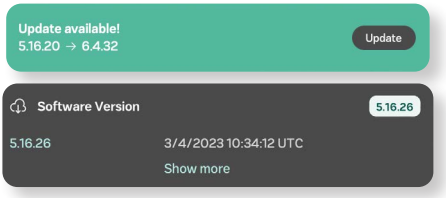
This panel shows the current status of the selected charger and enables remote control actions.



- The upper line shows the status of the charger:
  - **Disconnected**: The charger is not connected to the internet
  - **Scheduled**: An EV is connected and is charged with the set current at the scheduled time. If required, the charging process can immediately be initiated by clicking the ▶ icon.
  - **Charging**: An EV is connected and is charged with the set current (displayed on the right). If required, the charging process can be paused and restarted by clicking the ⏸ and ▶ icons.
- **Lock / Unlock**: Clicking this button locks / unlocks the charger
- **Max charging current**: Maximum charging current set via the **Wallbox** portal/app
- **Max available current**: Maximum permissible current for the charger model
- **Restore**: Clicking this button resets the charger to the factory settings
- **Restart**: Clicking this button restarts the charger

Update & Software Version Panel *

These panels show the software history for the selected charger and allow an update when a new version is available.



- **Update**: Clicking this button will update the charger to the latest software, which will take effect after an automatic restart.
- **Software version**: Date, time and version of the last software update for the charger based on the **Timezone** format selected in the user profile. Clicking the coloured version number shows a filtered list of all chargers in which this software version is installed.
- Clicking the coloured **Show more** drop-down button will display the software history for the charger based on the **Timezone** format selected in the user profile.

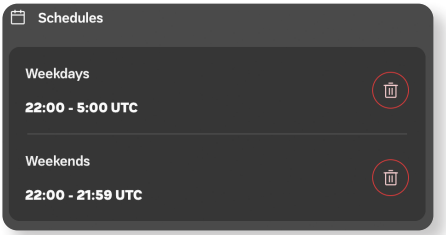
Firmware Version Panel *

The Firmware panel shows the current firmware of the selected charger.

- **XXX →**: Clicking the coloured firmware version shows a filtered list of all chargers on which this firmware version is installed.

Schedules Panel *

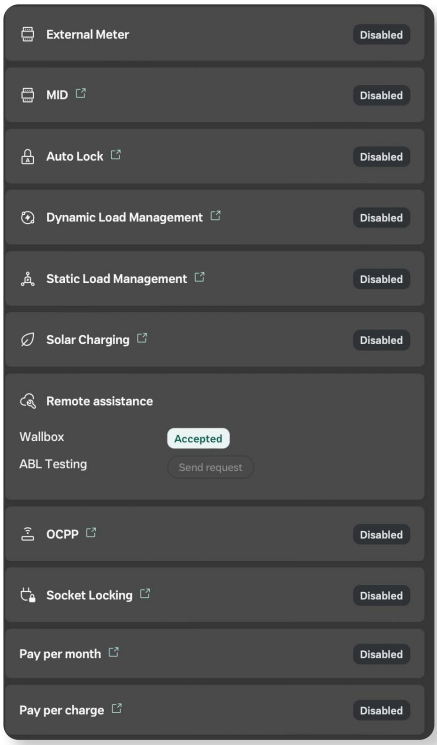
The **Schedules** panel shows all charging schedules that have been configured via the **Wallbox** portal/app.



- Each line shows the time frame for the selected days per week. Clicking the icon deletes this schedule.

Features panel *

The **Features** panel gives access to various functions that can be customized if the selected charger supports this functionality. If you need further information on a specific feature, please click the button next to it to open the corresponding page in the **Wallbox Help Center**.



- **External Meter**: This feature can only be used in combination with a compatible energy meter installed on site. When **Enabled**, you can enter the serial number of the meter and configure the measuring method (bi- or unidirectional) for setting up the **Dynamic Load Management** and **Solar Charging** functions (see below).
- **MID**: When **Enabled**, this feature allows to record the energy consumption of the charging station with one of the MID-certified power meters from Wallbox in accordance with the Measuring Instruments Directive (MID).
- **Auto Lock**: When **Enabled** (default), the charger is locked after the duration set in the **Wallbox** portal/app.
- **Dynamic Load Management**: DLM can only be used in combination with an energy meter. When **Enabled**, the energy available in the household is detected and dynamically allocated for the charging process.
- **Static Load Management**: When **Enabled**, this feature allows to specify the number of chargers and adjust their settings to optimize the charging process to the available energy.
- **Solar Charging**: This feature can only be used in combination with an energy meter and a PV installation. When **Enabled**, the PV surplus energy can be partially or exclusively used for charging to reduce the consumption of grid power.

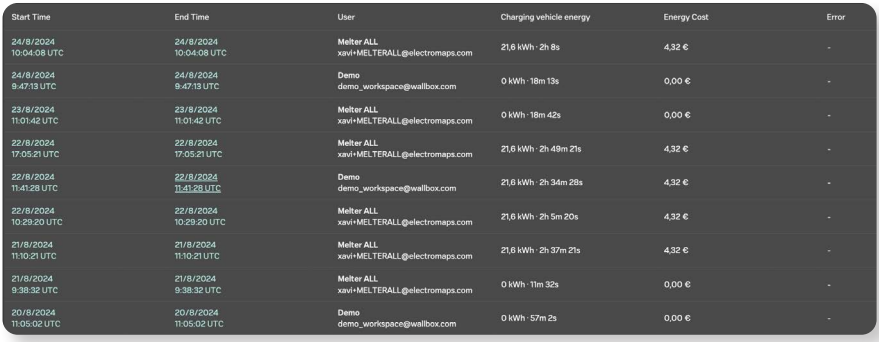
⚠ **Important!**

Dynamic Load Management and **Static Load Management** can't be used in combination with **Solar Charging**.

- **Remote assistance**: If you want to operate the selected charger remotely, you must first obtain approval from the owner of the charger. Via this panel, you can send a request to the owner of the charger. Once the request has been approved, you can operate the charger remotely via Cosmos.
- **OCPP**: When **Enabled**, the charger can communicate to Charging Station Management Systems (CSMS) via OCPP. For additional information, visit **https://openchargealliance.org**.
- **Socket Locking**: When **Enabled**, an external charging cable can be permanently locked in the charging socket of the charger to use your charger as a "cable version".
- **Pay per month**: When **Enabled**, each user who is authorised to use your charger can be billed monthly based on the rate and/or subscription costs you set in the **Wallbox** portal/app.
- **Pay per charge**: When **Enabled**, each user who is authorised to use your charger can be billed per charging process based on the rate and/or subscription costs you set in the **Wallbox** portal/app.

Home Chargers – Sessions

The second tab in the **Home Chargers** section provides a complete history and also a detailed overview of each charging session with the selected home charger. If not all entries on the page can be displayed, you can navigate to other pages by clicking on the **< Previous** and **Next page >** icons or on a specific page number below the history.

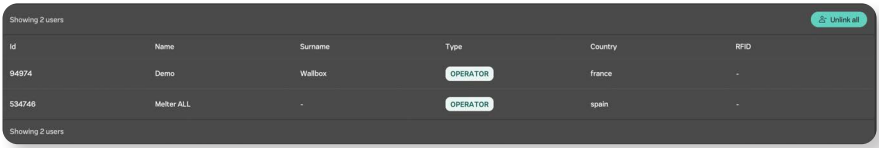


Start Time	End Time	User	Charging vehicle energy	Energy Cost	Error
24/8/2024 10:04:08 UTC	24/8/2024 10:04:08 UTC	**Melter ALL** xavi+MELTERALL@electromaps.com	21,6 kWh · 2h 8s	4,32 €	-
24/8/2024 9:47:13 UTC	24/8/2024 9:47:13 UTC	**Demo** demo_workspace@wallbox.com	0 kWh · 18m 13s	0,00 €	-
23/8/2024 11:01:42 UTC	23/8/2024 11:01:42 UTC	**Melter ALL** xavi+MELTERALL@electromaps.com	0 kWh · 18m 42s	0,00 €	-
22/8/2024 17:05:21 UTC	22/8/2024 17:05:21 UTC	**Melter ALL** xavi+MELTERALL@electromaps.com	21,6 kWh · 2h 49m 21s	4,32 €	-
22/8/2024 11:41:28 UTC	22/8/2024 11:41:28 UTC	**Demo** demo_workspace@wallbox.com	21,6 kWh · 2h 34m 28s	4,32 €	-
22/8/2024 10:29:20 UTC	22/8/2024 10:29:20 UTC	**Melter ALL** xavi+MELTERALL@electromaps.com	21,6 kWh · 2h 5m 20s	4,32 €	-
21/8/2024 11:10:21 UTC	21/8/2024 11:10:21 UTC	**Melter ALL** xavi+MELTERALL@electromaps.com	21,6 kWh · 2h 37m 21s	4,32 €	-
21/8/2024 9:38:32 UTC	21/8/2024 9:38:32 UTC	**Melter ALL** xavi+MELTERALL@electromaps.com	0 kWh · 11m 32s	0,00 €	-
20/8/2024 11:05:02 UTC	20/8/2024 11:05:02 UTC	**Demo** demo_workspace@wallbox.com	0 kWh · 57m 2s	0,00 €	-

- The **Start Time / End Time** columns display the date and the start and end time of the charging session according to the **Timezone** format selected in the user profile. If you click on the coloured entries for the **Start** and **End Time**, the corresponding charging session is opened with the historical information saved for it on the **Telemetry** tab (see "Home Chargers – Telemetry" on page 15).
- The **User** column shows the user for this specific charging process if several users have access to the COSMOS account (see the "Home Chargers – Users" section below).
- The **Charging vehicle energy** column shows the charging energy and the duration of the charging process based on the information in the **Start Time** and **End Time** columns.
- The **Energy Cost** column shows the cost of the charging energy for the session, provided the price per kWh was specified in the **Wallbox** portal/app.
- The **Error** column displays all errors during the charging session, e.g. if the charging process was interrupted due to a problem in the charger or due to an interruption in the power supply.

Home Chargers – Users

The third tab in the **Home Chargers** section shows a list of all users who are linked to the selected charger in the COSMOS account. If not all entries on the page can be displayed, you can navigate to other pages by clicking on the **< Previous** and **Next page >** icons or on a specific page number below the user list.



Showing 2 users — Unlink all

Id	Name	Surname	Type	Country	RFID
94874	Demo	Wallbox	OPERATOR	france	-
534746	Melter ALL	-	OPERATOR	spain	-

Showing 2 users

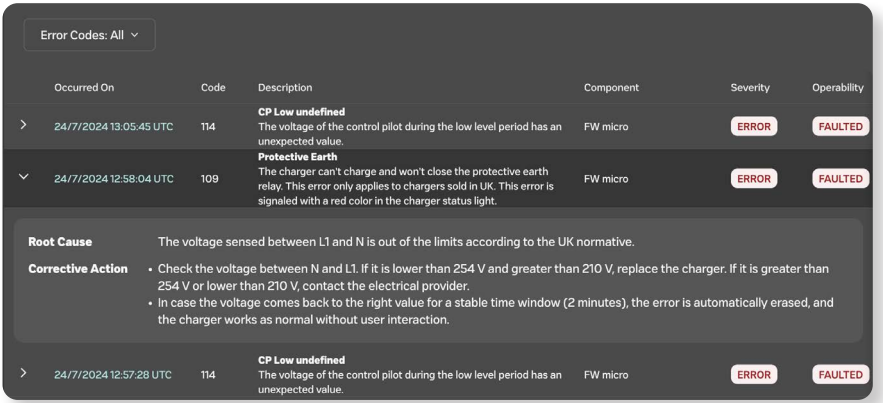
- The **Id** column shows the identifier for this user in the COSMOS account.
- The **Name** and **Surname** columns show the first name and surname for this user in the COSMOS account.
- The **Type** column shows the role for this user. The following roles can be assigned:
  - **Super Admin**
  - **Partner Agent**
  - **Partner Specialist**

- The **Country** column shows the country where the user is located, if set by the user in the **Wallbox** portal/app.
- The **RFID** column shows the identifier number of the RFID card that is linked to the user in the **Wallbox** portal/app.

Any user with the **Super-Admin** or **Partner Specialist** role can delete the links for all existing users by clicking on the **Unlink all** button at the top right of the **Users** tab.

Home Chargers – Errors

The fourth tab in the **Home Chargers** section shows a list of all errors that may have been generated by the charger during operation. If not all entries on the page can be displayed, you can navigate to other pages by clicking on the **< Previous** and **Next page >** icons or on a specific page number below the list of errors.



By default, the **Error Codes: All** option is selected in the filter menu. The following information is displayed:

- **Occurred on**: Date and timestamp of the error event, based on the **Timezone** format selected in the user profile
- **Code**: Internal code of the error event, derived from the Wallbox error code list. You will need this code when contacting the Wallbox support.
- **Description**: Brief contextual information on the cause of the error. For detailed information click on the arrow icon on the left (see below).
- **Component**: Component or assembly affected by the error
- **Severity**: Degree of severity of the error in the assembly
- **Operability**: This shows whether the charger is still functional despite the detected error. If not, please contact Wallbox support.

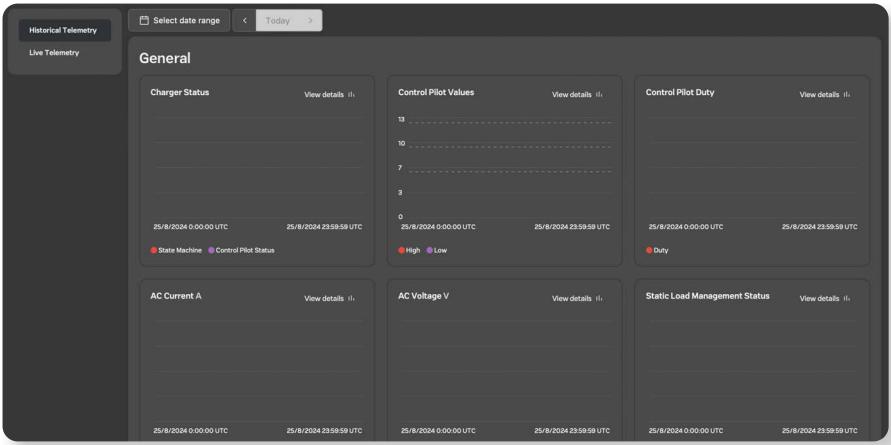
If required, the list can be filtered by selecting a specific error code from the **Error Codes:** drop-down menu and clicking the **Apply** button. All chargers linked to the COSMOS account that have this error code will now be displayed. To reset the filter, click on the **×** next to the selected error code.

Clicking the arrow to the left of each entry displays further information about this error in a drop-down field. **Root Cause** shows details of the cause of the error, while the measures in the **Corrective Actions** section suggest possible solutions for resolving the error.

If an error occurs that is not in the **Error Codes** list, please click on the **Firmware Errors** button to check whether the error is caused by the firmware installed in the charger.

Home Chargers – Telemetry

The fifth tab in the **Home Chargers** section shows all telemetry data that is transmitted by the selected charger. The **Telemetry** data offers valuable insights into the charger's performance and operational status, either in live mode (**Live Telemetry**) for the active charging process or in a historical view (**Historical Telemetry**) with date selection for completed charging processes in the past. Basically, the **Live** and **Historical Telemetry** tabs offer the same panels for displaying the charging data.



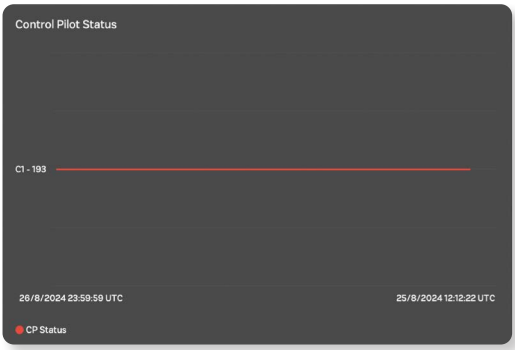
If the selected charger is online (connected to COSMOS via the Internet), the page displays the charger's **Live Telemetry** data and can also be used for diagnosis of errors in the charging system.

CP Status	Temperature L1	Temperature L2	Temperature L3	AC Voltage RMS1	AC Voltage RMS2	AC Voltage RMS3	AC Current RMS1	AC Current RMS2	AC Current RMS3
E - No Energy or CP short-circuited	16°C	16°C	17°C	238V	0V	0V	0A	0A	0A

The panel at the top of the page provides an overview of the various measurements in the selected charger. Detailed information on the measurements can be found in the panels below, which visualize the progression of the measured values over time.

CP Status / Control Pilot Status

Here, the DC voltage status of the Control Pilot signal of the charging system is displayed. Each status is linked to the colour of the charger's halo/status LED and is displayed in the associated panel over a period of 2 days.



The following states can be displayed:

- **A1**: The EV is disconnected.

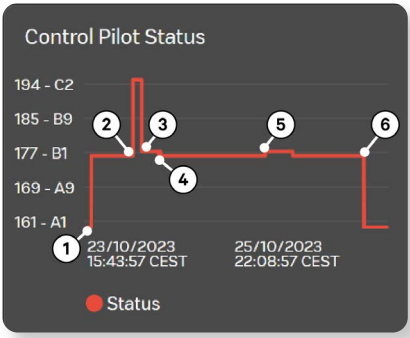
> ⚠ **Important!**
>
> If the connector of the charging cable is plugged into the EV, but the charger still is in status A1 (green), the continuity of the CP cable may be damaged. In this case, try connecting a different charging cable.

- **B1**: The vehicle is connected to the charger, but the charging process is stopped by the charger because a charging schedule has been set up or the EMS (Energy Management System) has not detected sufficient available power.
- **B2**: The EV is connected to the charger, but the charging process has not been initiated for the following reasons:
  - An internal schedule of the EV is active.
  - There is a limit to the SoC (state of charge) of the EV.
  - The charging location is not permitted by the EV.
  - A feature of the EV's OBC is not supported.
- **C2**: The controller of the EV has issued a charging request and the charging process is in progress.

> ⚠ **Important!**
>
> Please note that some BYD electric vehicles do not follow the standard protocol and display the C2 status even though an internal schedule is active and the EV is not charging.

Control Pilot Status example

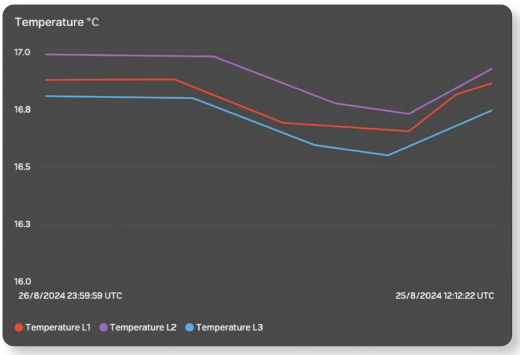
This figure shows an example of the detailed display in the **Control Panel Status** panel over the specified period.



1. At this moment, the EV is connected to the charger, but is not charging due to scheduled charging.
2. At this moment, the charging schedule is activated and the vehicle is charged until the battery is full.
3. At this point, the charging plan is still active and the charger waits for a further request from the EV until the schedule is completed.
4. From this moment on, the vehicle remains connected to the charger without an active charging schedule.
5. At this moment, the next schedule is triggered without the charging process being initiated, as the EV is fully charged.
6. At this moment, the EV is finally disconnected from the charger.

Temperature °C L1/L2/L3

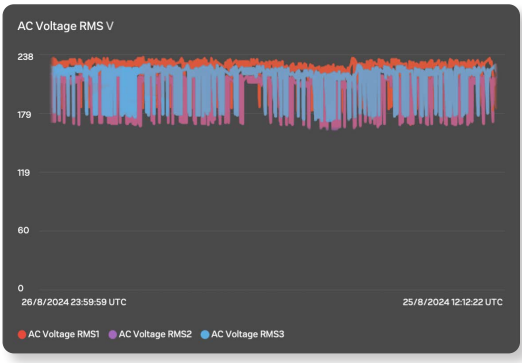
Here, the temperature for each live conductor of the charging cable is measured and displayed in degrees Celsius. The panel at the top of the page shows the current temperature values for **Temperature 1/2/3,** while the **Temperature °C** panel shows the temperature curve for each conductor over the specified time period.



For a better overview and allocation, the temperature curve for each conductor is displayed in its specific colour. The vertical temperature range is adapted to the maximum and minimum temperature of all three conductors, the horizontal timeline is linked to the time frame of the **Control Pilot Status**.

AC Voltage RMS1/2/3

Here, the output voltage for each live conductor of the charging cable is measured and displayed as an effective value (RMS, Root mean Square) in volts. The panel at the top of the page shows the current voltage values for **AC Voltage RMS 1/2/3,** while the **AC Voltage RMS1/2/3** panel shows the voltage curve for each conductor over the specified time period.



For a better overview and allocation, the voltage curve for each conductor is displayed in its specific colour. The vertical range extends from zero to the nominal grid voltage, the horizontal timeline is linked to the time frame of the **Control Pilot Status**.

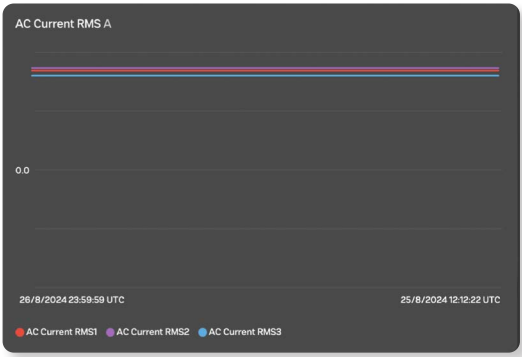
⚠ **Important!**

In normal grid operation, the **AC Voltage RMS** curves for each conductor should show a linear characteristic with low variance. In operation with a PV system, however, fluctuations in the output voltage can occur, which are reflected in a dynamic characteristic in the panel.

AC Current RMS1/2/3

Here, the output current for each live conductor of the charging cable is measured and displayed as an effective value (RMS, root mean square) in amperes.

The panel at the top of the page and the **AC Current RMS1/2/3** panel show a static current value for each conductor over the specified time period, which should match the output current set in the **Wallbox** portal/app for the selected charger. However, the current value is displayed in the panel with a separate colour for each phase.



⚠ **Important!**

In normal grid operation, the **AC Current RMS** for each conductor should show a linear characteristic with low variance. In operation with a PV system, however, fluctuations in the output current can occur, which are reflected in a dynamic characteristic in the panel.

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