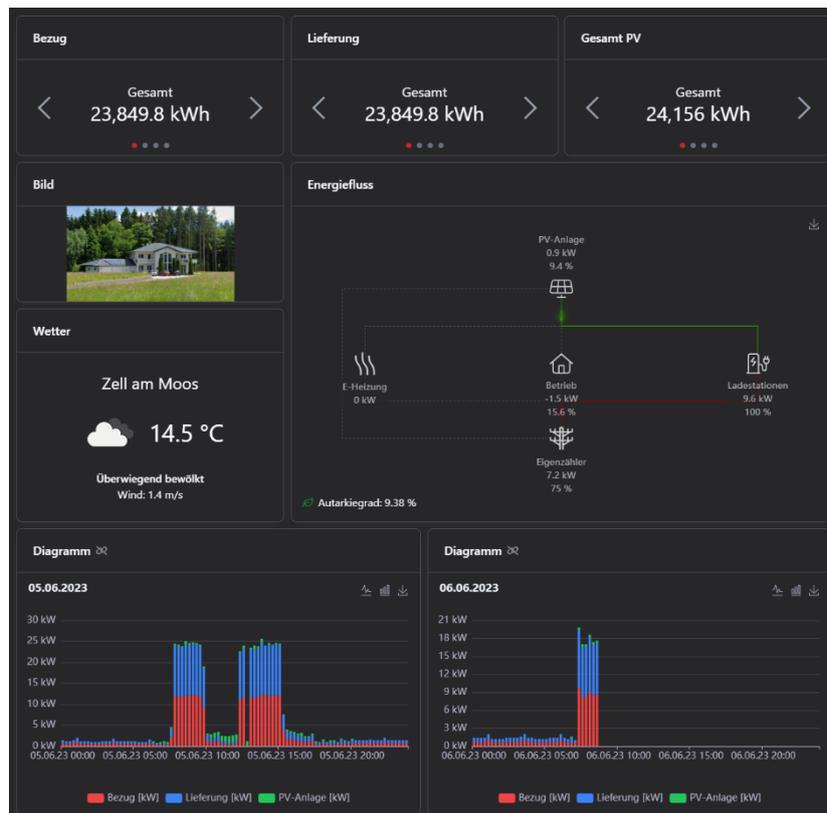


VERSION V1.0.11

Manual Webserver

Complex energy management and optimization solutions

Digitize, visualize and optimize energy consumption



EDITED 2025-05-16 ASKI	STATUS Released	SECURITY LEVEL Public		
APPROVED Click or tap to enter a date.	DOCUMENT TYPE Manual			
OWNING ORGANIZATION ABB Electrification Smart Power	DOCUMENT ID. 9AKK108471A0273	REV. B	LANGUAGE EN	PAGE 1/22

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1. Hardware requirements

The web server can be installed on all devices in the ALS-profi-s / AZS-eco-s / AZS-ecs-s series from serial number 5000 (required firmware - v.20.6.a).

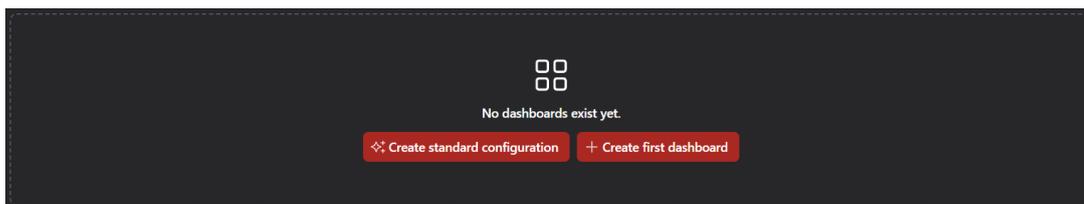
The web server and firmware are updated with the ALS-Visual 8/9 software.

The users are stored in the control unit and can be changed using the ALS-Visual 8/9 software.

2. Quick starter

The Quick starter allows the user a quick initial configuration and creates customized dashboards and meter groups.

If no dashboards have been created yet, the start page looks like this:



To create the standard configuration, click on "Create standard configuration". If you are not yet logged in, a login dialog box will open where you must log in to continue the process.

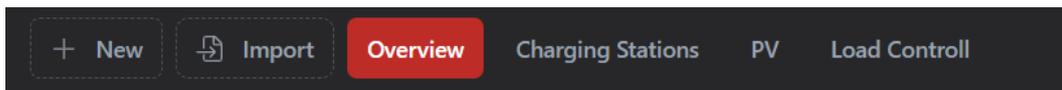
 A screenshot of a dark-themed login dialog box. The title "Login" is at the top left. Below it, the label "Username" is followed by a text input field. Below that, the label "Password" is followed by a text input field. At the bottom center, there is a large red button labeled "Login".

If meter groups have already been created, a further dialog appears asking whether you want to overwrite these meter groups. The process is continued by pressing the "Overwrite meter groups" button.

 A screenshot of a dark-themed dialog box with a warning icon (exclamation mark in a red circle) on the left. The title "Overwrite meter groups" is in bold. Below the title, the text "Are you sure you want to overwrite your already created meter groups?" is displayed. At the bottom, there are two buttons: a grey "Cancel" button and a red "Overwrite meter groups" button.

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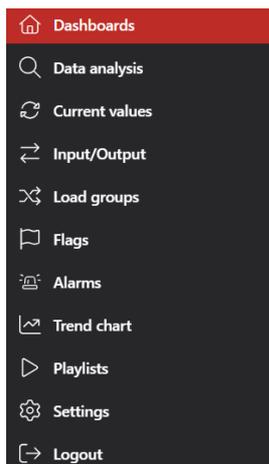
Dashboards that can currently be created are Overview, Charging stations, PV and Load control.



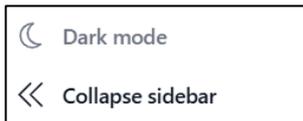
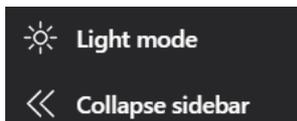
3. Menu

The menu is divided into the following items:

1. Dashboard
2. Data analysis
3. Current values
4. Input/Output
5. Load groups
6. Flags
7. Alarms
8. Trend Chart
9. Playlists
10. Settings
11. Login / Logout



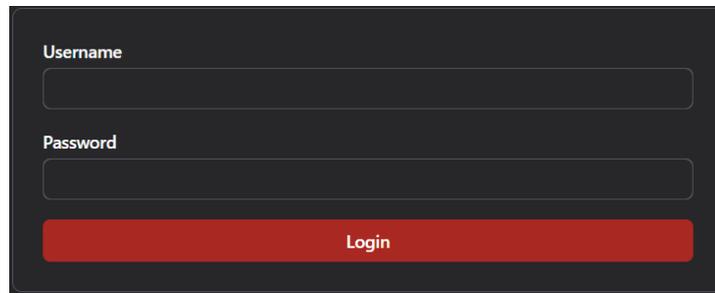
In addition, you can use "Bright mode" or "Dark mode" to switch between light and dark mode and "Collapse sidebar" to collapse the menu bar.



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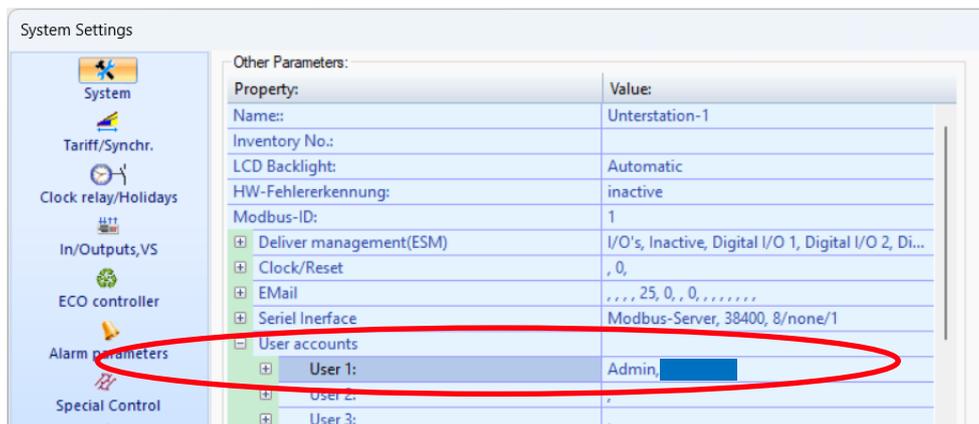
4. Login / Logout

You must be logged in to configure the website. If you click on the "Login" menu item, you will be redirected to a login window with your username and password.



A login form with a dark background. It contains two input fields: "Username" and "Password". Below the fields is a prominent red button labeled "Login".

As the web server runs on the controller, the login data is also synchronized via this. The predefined users can be found in the respective controller in the "System" sub-item under user accounts.



5. Dashboard

5.1. Dashboard

In information management, a dashboard is a graphical user interface that is used to visualize data. The settings are saved in the controller, so the dashboard is displayed in the same way in all browsers.

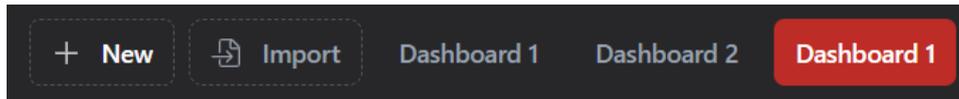
5.1.1. Setting options

Important! → In principle, dashboards can only be added, edited, deleted or saved if you are logged in (see [Login / Logout](#)).

With "New" you can create a new dashboard. If you want to import an existing dashboard, you can do this by clicking on "Import" (select exported dashboard in the file manager).

The dashboards that have already been created are also listed here.

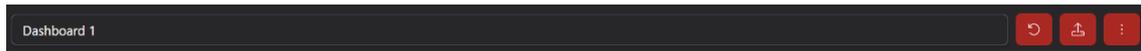
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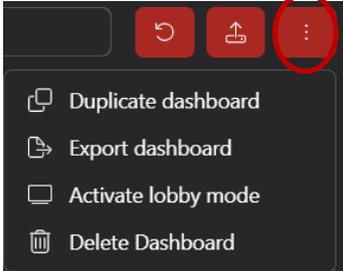


To edit a dashboard, the following button must be pressed:



You can now edit the dashboard.



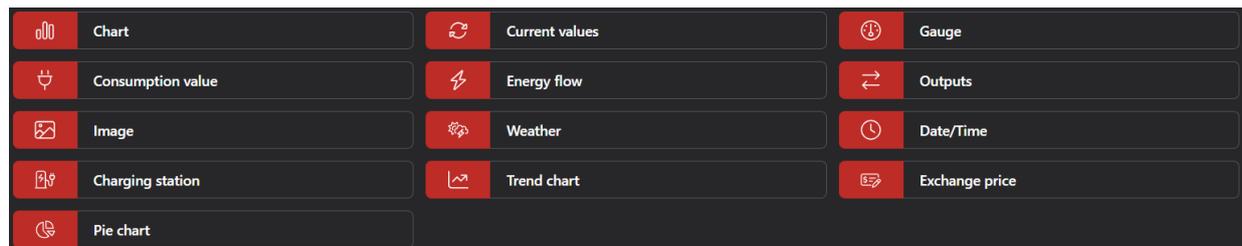
 <p><u>Discard dashboard</u> Everything that has not been saved is deleted or discarded.</p>		
 <p><u>Publish dashboard</u> Dashboard is saved.</p>		
 <p><u>Selection of several settings</u> Duplicate, export or delete dashboard. Activate lobby mode.</p>		

5.2. Widgets

A widget is an element on a user interface that can be used interactively.

5.2.1. Setting options

To add a widget to the dashboard, one of the following elements must be selected by clicking on it:



Important! → A widget can only be added to a dashboard that is editable (see **setting options**).

There are 3 icons in the top right-hand corner of the newly inserted widget:

- Settings 

As soon as a widget has been inserted, it must be set or configured. The settings menu varies depending on the widget - but usually includes title, data source, ...
- Duplicate 

Copy the widget and paste it again at the end of the dashboard.
- Delete 

Deletes the widget.

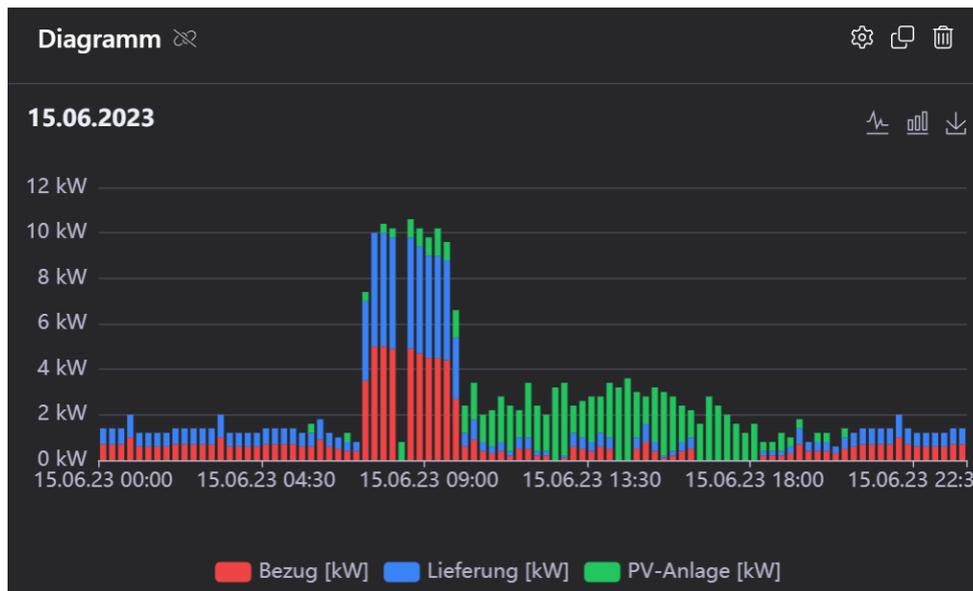
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Important! → a widget can only be edited, duplicated or deleted if you are logged in (see [Login / Logout](#)).

5.3. Widgets in detail

Chart

With this widget, the performance and consumption data of the individual meters and meter groups can be displayed in a chart and thus compared.



Setting options:

- Title of the widget
- Chart type (bar, line and range chart)
- Type of data (performance and consumption data)
- Stacking multiple values
- Period
- Meters or meter groups to be displayed in the diagram

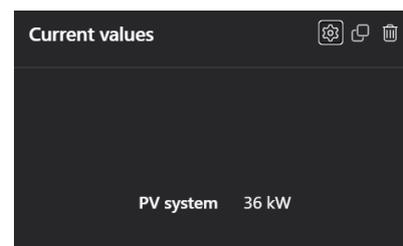
The consumption data can also display price and CO2 savings.

Current values

This widget lists the name and power consumption of certain meters or meter groups and is updated every 5 seconds.

Setting options:

- Title of the widget
- Meters or meter groups to be listed in this widget



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Gauge Chart

This widget displays the performance of a selected meter or a selected meter group in the form of a speedometer. The difference to the "Current value" widget is that only one value can be displayed.

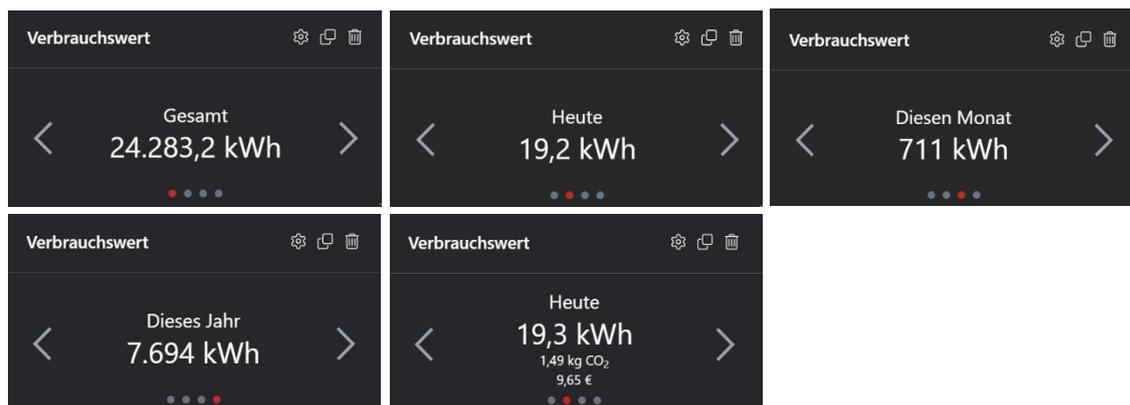
Setting options:

- Title of the widget
- Meter or meter group
- Minimum and maximum value of the dial chart



Consumption value

With this widget, depending on the requirements, the consumption value, costs, and CO2 savings of specific meters or meter groups can be displayed for a certain period of time. Using arrows, one can switch back and forth between the different time periods.



Setting options:

- Title of the widget
- Meter or meter groups
- Default time range (Total, Today, This month, This year, Switch automatically)
- ➔ With "Switch automatically", the system automatically switches between the specified time periods after a few seconds (manual operation of the arrows is not necessary).
- Display consumption data (kWh)
- Show price
- Show CO2 savings
- Show degree of self-sufficiency

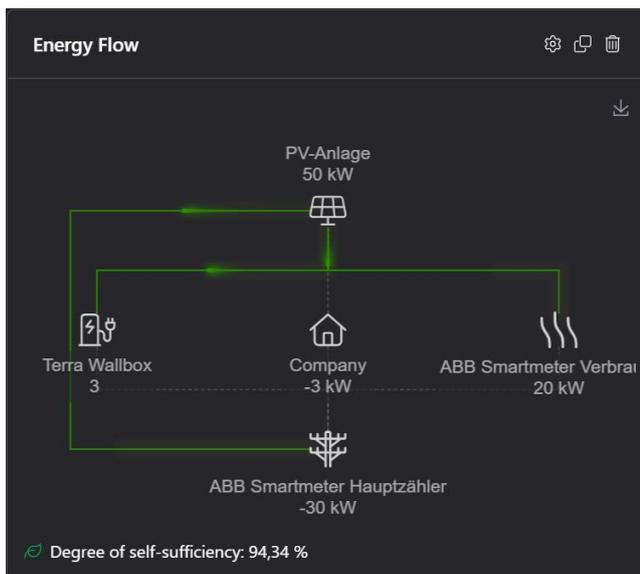
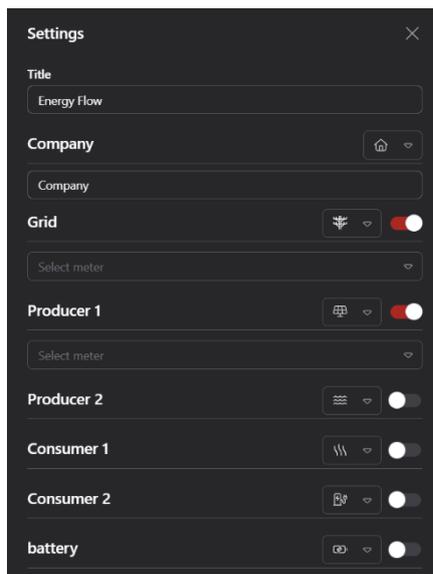
Energy flow

This widget shows the energy flow of a system. Depending on requirements, 1 grid, 2 generators, 2 consumers and 1 battery can be added to the network. If a selected meter or a selected meter group performs more than one measurement, a drop-down field appears next to the text field with all measurements, one of which must be selected. For a detailed view, you can change the icons of the devices using predefined icons.

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Setting options:

- Title of the widget

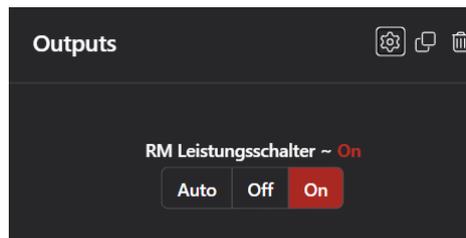


Outputs

This widget provides an overview of inputs/outputs, load groups and flags that can be switched on and off manually.

Setting options:

- Title of the widget
- IOs, load groups or flags that should be switched on and off manually in the widget



Image

This widget offers the possibility to add an image to your dashboard.

Setting options:

- Title of the widget
- File (possibility to upload an image file)
- Display mode (centering and filling)
 - ➔ "Fill" - fills the image in the entire widget area
 - ➔ "Center" - places the image in the middle and does not change the size of the image



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Weather

This widget provides information about the weather in a set city.

Setting options:

- Title of the widget
- City

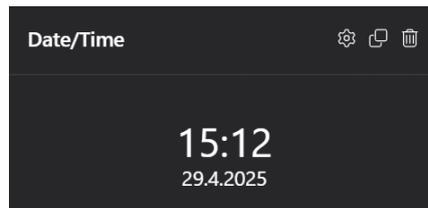


Date / Time

This widget provides information about the date and time.

Setting options:

- Title of the widget

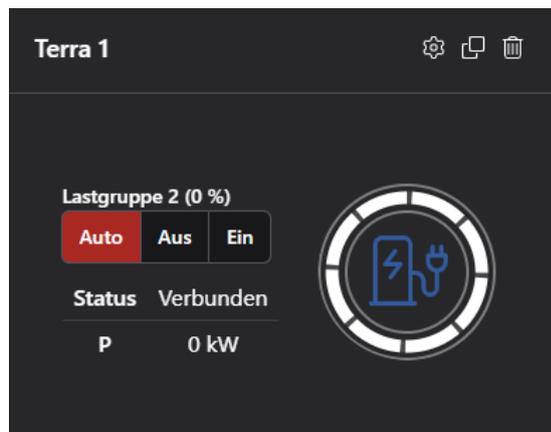


Charging station

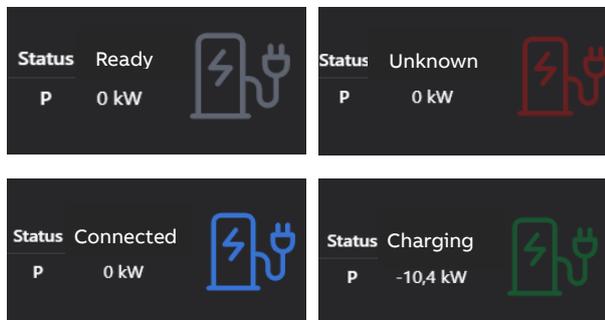
This widget provides information about the set charging station. In addition, a status can be selected and controlled using the button or switch view.

Setting options:

- Title of the widget
- Meter or charging station
- Show names
- IO, load group or flag that should be controlled manually for the widget
- Push-button or switching view



The color of the charging station symbol reflects the status of the charging station:



Trend chart

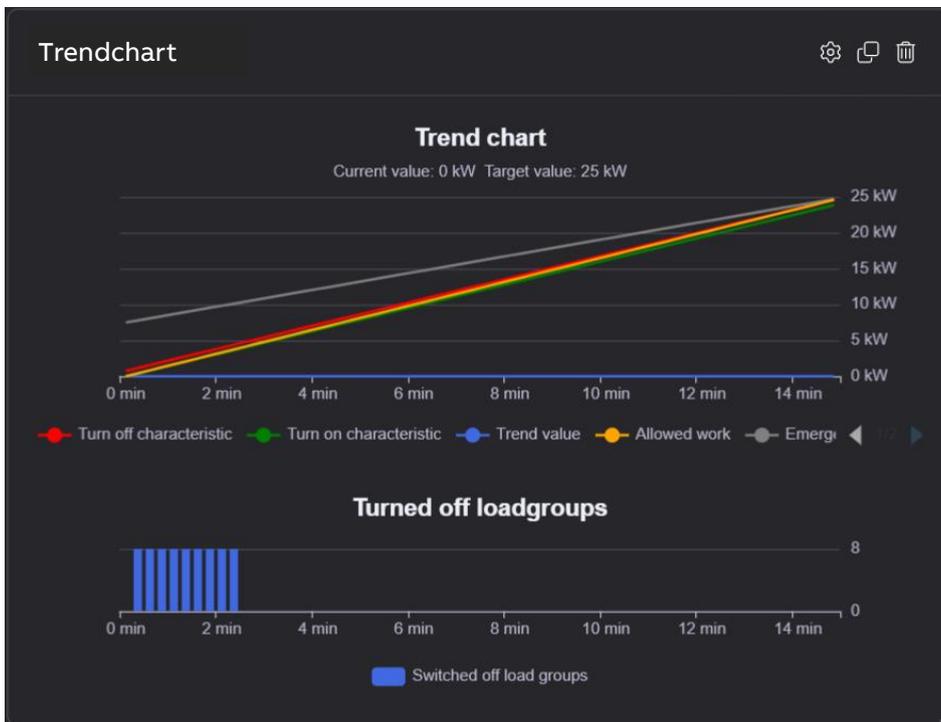
This widget displays the trend chart. Values such as the current value and setpoint as well as characteristics such as the switch-off characteristic, the switch-on characteristic, the trend value, permitted work

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and the emergency stop characteristic are displayed. The load groups that have been switched off are also displayed.

Setting options:

- Title of the widget

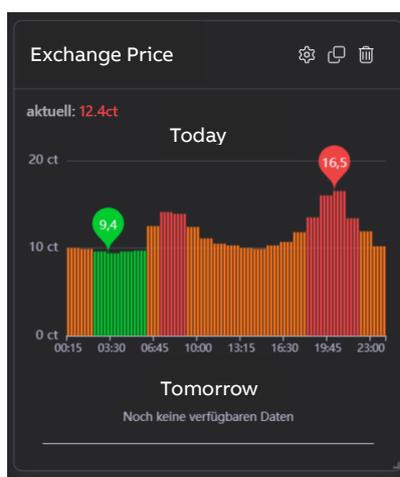
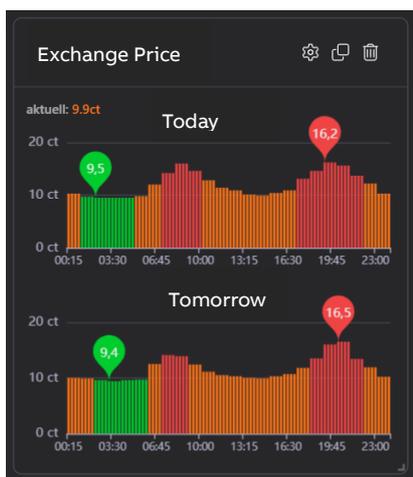


Exchange price

This widget provides information about the electricity price for today/tomorrow and offers a clear overview with the help of values such as the current, minimum and maximum price for both days.

Setting options:

- Title of the widget



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Pie chart

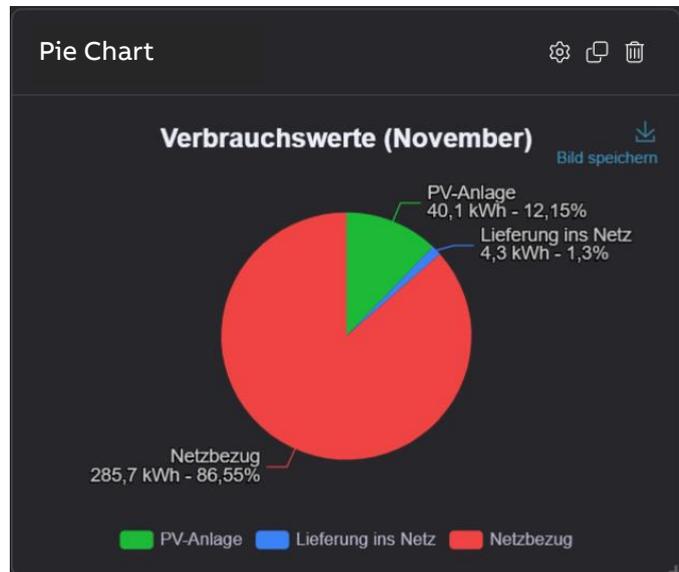
Like the diagram, this widget can be used to display consumption data from the individual meters and meter groups in a diagram and can therefore be compared.

In contrast to the diagram, instantaneous values can also be displayed here.

Setting options:

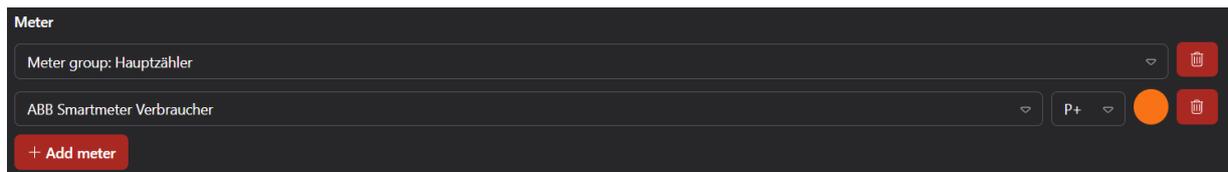
- Title of the widget
- Type of data (consumption values, instantaneous values)
- Period (today, this month, this year)
- Display name, value and percentage
- Meters or meter groups to be displayed in the diagram

In the widget itself, the diagram can also be saved as an image using the following symbol at the top right:



6. Data analysis

Here, performance and consumption data from the individual meters and meter groups can be compared and displayed in a diagram. The "Add meter" button can be used to add the values of a meter or meter group to the diagram. The respective meter is deleted again with "Delete meter". If a meter that performs more than one measurement is selected, a drop-down field appears next to the text field with all measurements, one of which must be selected. If a color has not yet been defined for a meter group, you can set it using a color dot.



The type (power and consumption data), the period (day, month, year) and a time period (from - to) can also be set.

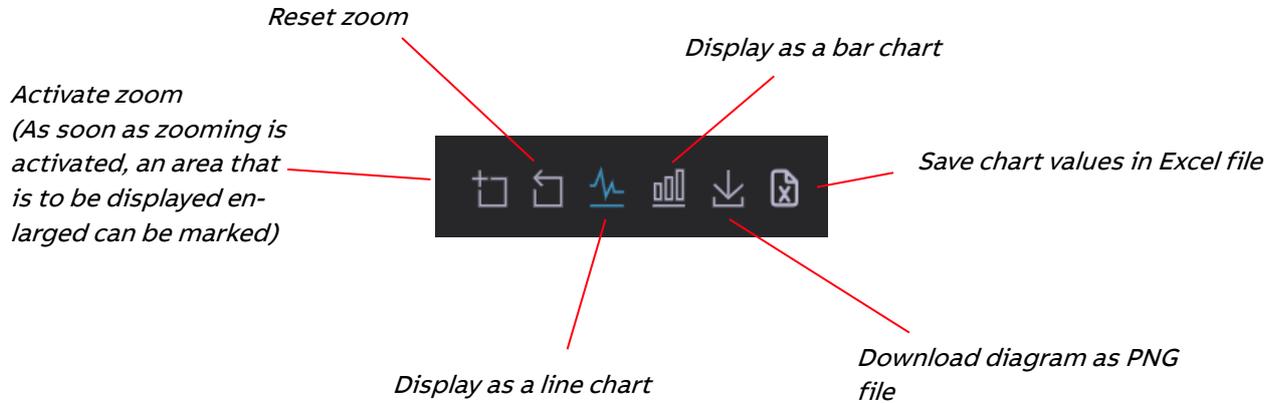
Available data:

TYPE	PERIOD	DATA
POWER	Day	Last 24 hours per 15 minutes 1 value = 192 values
POWER	Month	Last 2 months per day 1 value = 62 values
POWER	Year	Last 2 years per month 1 value = 24 values
CONSUMPTION	Day	Last 50 days per day 1 value = 50 values
CONSUMPTION	Month	Last 24 months per month 1 value = 24 values
CONSUMPTION	Year	Last 8 years per year 1 value = 8 values

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Type: Power data | Period: Day | from: 09.04.2025 | to: 23.04.2025

Further setting options:



The comparison between a meter group and a meter could look like this:



7. Current values

The meter ID, the name, the type of measurement (voltage, current, power, ...) and the value (volts, amps, watts, ...) of all meters are listed here and updated every 5 seconds. You can use a search field to filter for specific values.

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Current values			
Filter			
Enter search term...			
#	Name	Measurement	Value
1	Lastkontrollsystem	Hauptzähler	0 kW
2	Lastkontrollsystem	Sollwert	25 kW
3	Digital I/O 2		0 kW
4	PV Anlage	U _{L1/N}	247,8 V

8. Input/Output

Overview of all inputs and outputs that can be switched on and off manually. You can use a search field to filter for specific inputs/outputs.

Important! → Only logged-in users can switch inputs/outputs on and off manually (see [Login / Logout](#)).

Input/Output		
Filter		
Enter search term...		
Name	Value	State
Digital I/O 1	Off	
Digital I/O 2	0 kW	
Digital I/O 3	Off	
RM Leistungsschalter	On	Auto Off On
Digital I/O 5	100 %	Auto Off On

9. Load groups

Overview of all load groups that can be switched on and off manually. You can use a search field to filter for specific groups.

Important! → Only logged-in users can switch load groups on and off manually (see [Login / Logout](#)).

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Load groups

Filter

Enter search term...

Name	Value	State
Lastgruppe 1	0%	Auto Off On
Lastgruppe 2	0%	Auto Off On
Lastgruppe 3	0%	Auto Off On

9.1. Load group switching

Below the table of load groups are the corresponding circuits. Information such as the load group number, the name of the load group, the time when the load group was switched on or off, the status and the reason for switching and the seconds for which the load group was switched off can be displayed. A date picker can be used to call up the switching operations for a specific day. If the date has not yet been set, the data for today is displayed. The load group search field also filters the circuits at the same time.

04/23/2025

Load group no.	Designation	Time	State	Reason	Shutdown duration (in seconds)
----------------	-------------	------	-------	--------	--------------------------------

10. Flags

Flags are used to save the status of a condition or event. Here is an overview of all flags that can be switched on and off manually. You can use a search field to filter for specific flags.

Important! → Only logged-in users can switch flags on and off manually (see [Login / Logout](#)).

Flags

Filter

Enter search term...

Name	Value	State
TCP Alarm	100%	Auto Off On
Virtueller Speicher 30	100%	Auto Off On
Virtueller Speicher 31	0%	Auto Off On

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11. Alarms

Overview of all alarms that can be acknowledged using the "Acknowledge" button, deactivated using "Deactivate" and deleted using "Delete". You can use a search field to filter for specific flags.

Important! → Only logged-in users can acknowledge, deactivate or delete alarms (see [Login / Logout](#)).

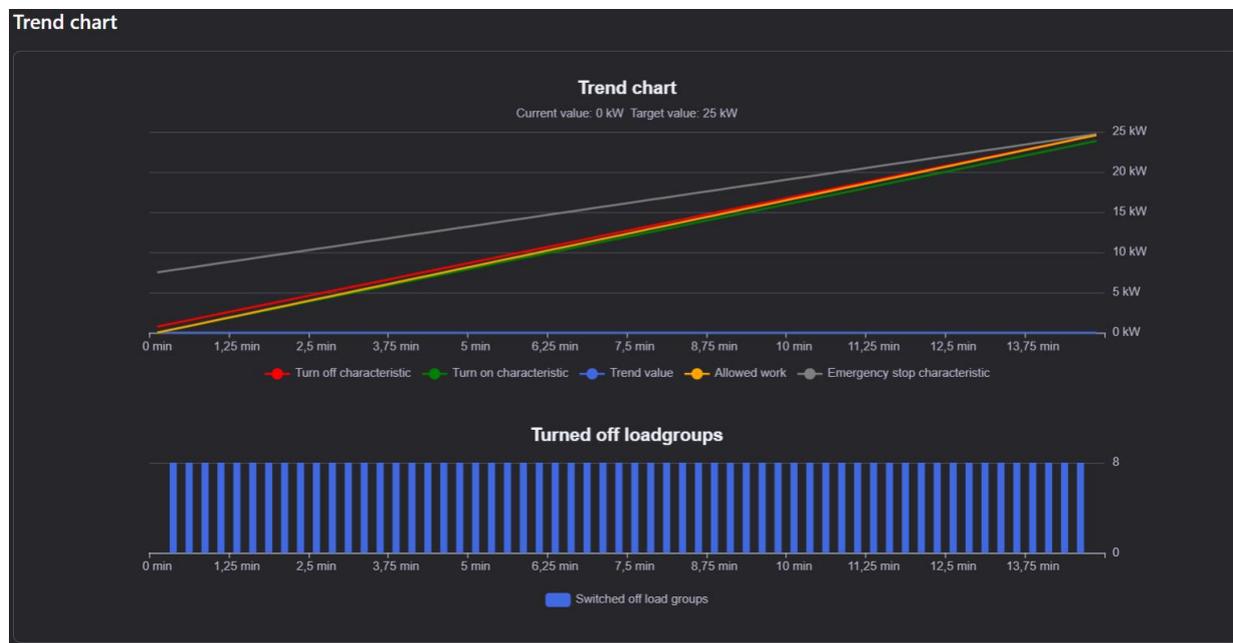
Alarms

Filter

Name	State	
Alarm 1	Active	Acknowledge

12. Trend chart

The trend chart of the controller is displayed here with values such as the current value and setpoint as well as characteristic curves such as the switch-off characteristic curve, the switch-on characteristic curve, the trend value, permitted work and the emergency stop characteristic curve. The load groups that have been switched off are also displayed.



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13. Playlists

Playlists allow you to seamlessly display a series of dashboards one after the other. Ideal for events, trade fairs or information stations where several topics need to be covered.

Create playlists

- Click on **Playlists** in the sidebar.
- Create a new playlist and add several dashboards to be displayed.
- For each playlist, select how long a dashboard should be displayed before switching to the next one.
- Press the **play button** to start the playlist and automatically display the dashboards in the specified order.

Edit playlist Cancel Publish Playlist

Name

Available dashboards

Interval **Unit**

Playlists

Saved playlists Add new playlist

NAME	DASHBOARDS
Playlist Dashboards	Dashboard 1 Dashboard 2 Dashboard 1

13.1. Lobby mode

Activation of the lobby mode

- Go to your dashboard and select the **Activate lobby mode** option under Settings (3 dots). Your dashboard is then displayed in full-screen mode, without distractions from other user interface elements.

Lobby mode is ideal for presentations where you want to ensure that the audience only sees the most important information.

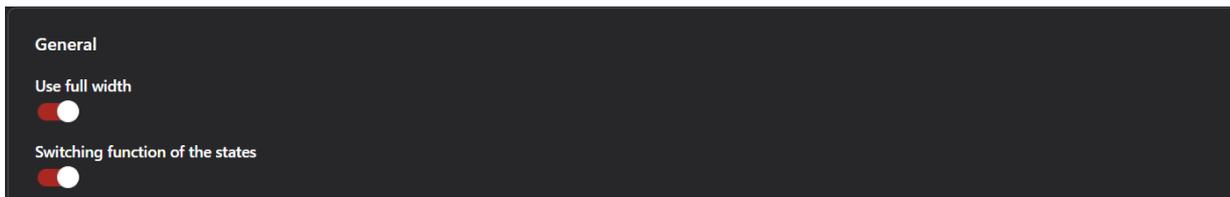
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14. Settings

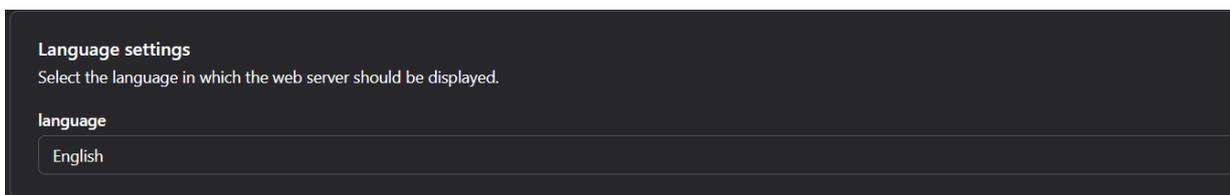
14.1. General

If "Use full width" is activated, all pages are adjusted to the maximum width of the window. If this is deactivated, the width is limited.

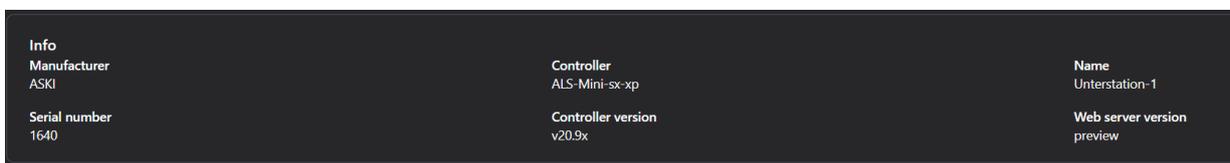
If "Switching function of states" is activated, the switching function of the IOs, load groups and flags is activated. If this is deactivated, the statuses can no longer be switched.



In the next section you can select the language, in which the web server should be displayed.



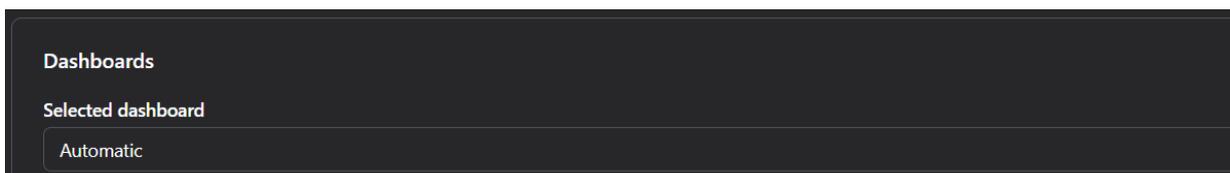
In addition, information such as manufacturer, serial number, controller, controller version, name and web server version are displayed under this item.



14.2. Dashboards

Under "Selected dashboard", you can select a dashboard to be displayed to the user by default when they open the website or navigate to the "Dashboard" menu item.

Important! → a standard dashboard can only be loaded if you are logged in (see *Login / Logout*).



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14.3. Meter groups

The individual meters can be grouped here. The individual meter values are added together by the meter groups - this has the advantage that you can work with the total value of the devices.

If a meter that performs more than one measurement is selected, a drop-down field appears next to the text field with all measurements, one of which must be selected. You can use a search field to search for the meter group you have already created. If none exist yet, you can add predefined groups using "Add standard meter groups". Meter groups can be added, edited, deleted and saved.

Important! → Only possible if you are logged in (see [Login / Logout](#)).

If you want to edit a meter group, you have the following setting options:

- Name of the group
- Unit of Power
- Consumption unit
- Price per unit in €
- CO2 savings factor
- Color
- Chart type
- Set upper and lower limits

As soon as a meter group is created, it has its own color. This remains the same across the entire web server.

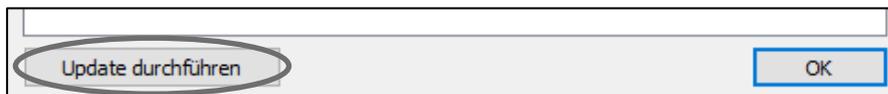
15. Web server update

To update the web server of a controller, click on "Update WebS" under "Device".

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The folder of the desired web server version must then be selected. The update is finally carried out with "Perform update".

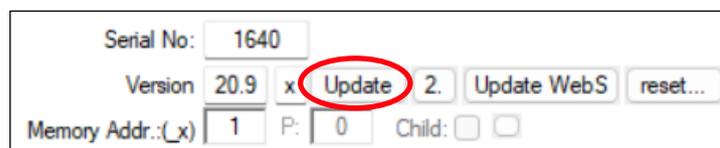
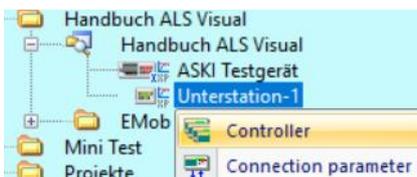


16. Trouble shooting

What can I do if the web server does not work as it should?

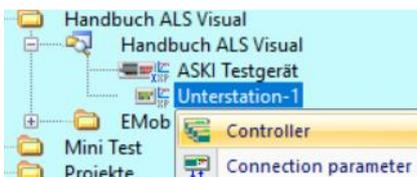
Update controller firmware

To update the firmware, click on "Update" under "Controller" in the ALS Visual for the corresponding controller. After pressing the button, a file explorer should open where you can select the latest firmware suitable for this controller.



Restart controller

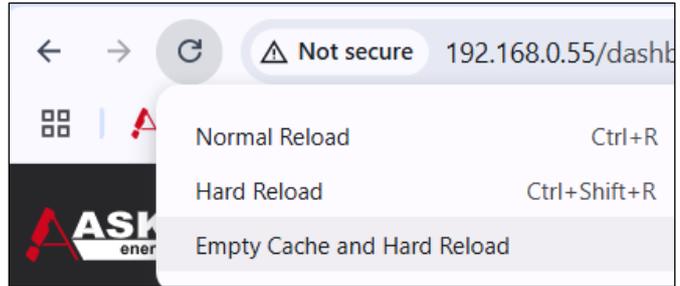
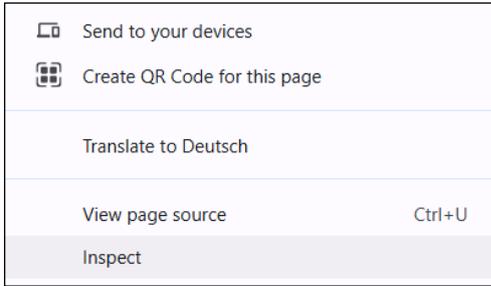
To do this, press "reset" under "Controller" in the ALS Visual for the corresponding controller. After pressing the button, the controller should restart.



Completely refresh the website & clear the browser cache

To initiate a complete restart of the website, right-click anywhere on the web server's website. A menu appears where you select "Inspect". Now click with the left mouse button on the loading symbol at the top left of the browser. After you have pressed this once, click on the same loading symbol again with the right mouse button. A menu then appears again, where you select "Empty Cache and Hard Reload".

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17. Further information

17.1. List of related documents

Ref #	Document type, title	Document ID

18. Appendix

19. Revisions

Rev.	Page/Chapter	Description	Date/issue.
A		Creation of basic document	06.06.2023
A		Webserver Version v1.0.6	04.07.2023
A		Webserver Version v1.0.7	12.07.2023
A		Web server version v1.0.8	24.07.2023
A		Web server version v1.0.9	04.09.2023
A		Webserver Version v1.0.10	14.09.2023
A		Webserver Version v1.0.11	05.12.2023
B		Lobby mode & general updates	16.05.2025

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