



Publisher:  
Solare Datensysteme GmbH  
Fuhrmannstr. 9  
72351 Geislingen-Binsdorf  
Germany

International support  
Tel.:+49 7428 9418 -640  
Fax:+49 7428 9418 -280

e-mail: [support@solar-log.com](mailto:support@solar-log.com)

Italy  
Technical support: +39 0471 631032  
e-mail: [italy-support@solar-log.com](mailto:italy-support@solar-log.com)

France  
Technical support: +33 97 7909708  
e-mail: [france-support@solar-log.com](mailto:france-support@solar-log.com)

Switzerland  
Technical support: +41 565 355346  
e-mail: [switzerland-fl-support@solar-log.com](mailto:switzerland-fl-support@solar-log.com)

United States  
Technical support: +1 203 702 7189  
e-mail: [usa-support@solar-log.com](mailto:usa-support@solar-log.com)

# Table of Contents

<b>1</b>	<b>General Information.....</b>	<b>6</b>
1.1	The necessary steps for precision monitoring of your PV plant with the Solar-Log™ .....	6
<b>2</b>	<b>Operating via a web browser within your own network.....</b>	<b>7</b>
2.1	Requirements.....	7
2.2	Overview.....	8
2.2.1	General Navigation.....	8
2.3	Accessing the Start page.....	12
2.4	Accessing Yield Data.....	14
2.4.1	Current values.....	14
2.4.2	Energy flow.....	15
2.4.3	Table.....	16
2.5	Production.....	17
2.5.1	Day view.....	18
2.5.2	Month view.....	20
2.5.3	Year view.....	22
2.5.4	Total view.....	23
2.6	Consumption.....	24
2.7	Balances.....	30
2.7.1	Day balance.....	32
2.7.2	Month balance.....	33
2.7.3	Year balance.....	34
2.7.4	Total balance.....	35
2.8	Finances.....	36
2.9	Sensor.....	38
2.10	System Information.....	39
2.11	Accessing Diagnostic values.....	40
2.11.1	Inverter Diagnosis.....	40
2.12	Battery Diagnostic.....	44
2.12.1	Accessing Event logs.....	49
2.12.2	Accessing Notifications.....	50
2.12.3	Accessing Feed-In Management.....	52
2.12.4	Accessing the SCB Monitor (only Solar-Log 2000).....	60
2.12.5	Accessing components.....	61
2.12.6	Smart Energy.....	64
2.12.7	Accessing CSV Export.....	69
2.12.8	Accessing Support.....	70
<b>3</b>	<b>Notifications.....</b>	<b>71</b>
3.1	Yield E-mail.....	71
3.1.1	Explanation of the individual E-mail Functions:.....	73

3.2	Performance Monitoring.....	76
3.2.1	Performance Monitoring Notification.....	78
3.2.2	Calculation and Explanation of the Notification .....	80
<b>4</b>	<b>Operating the Solar-Log 1200 and 2000 via Touch Display .....</b>	<b>81</b>
4.1	Navigating from the touch screen.....	81
4.2	Accessing the Dashboard .....	83
4.3	Accessing the Energy Balance.....	83
4.4	Accessing Forecast.....	84
4.5	Accessing Yield history .....	85
4.6	Accessing Environmental performance.....	86
4.7	Accessing the USB menu .....	87
<b>5</b>	<b>Operating the Solar-Log 500 and 1000 via the Display .....</b>	<b>89</b>
5.1	Display Solar-Log 500 .....	89
5.2	Display Solar-Log 1000 .....	89
5.3	How to Navigate with the Touchscreen .....	90
5.4	Accessing Yield Data .....	91
5.4.1	How to navigate between different overviews.....	91
5.4.2	The meaning of the values in the overviews .....	92
5.4.3	Daily Graph.....	93
5.4.4	Monthly Graph.....	94
5.4.5	Yearly Graph.....	95
5.4.6	Overall Graph.....	96
5.4.7	Large External Display .....	97
5.4.8	Power Balance.....	98
5.5	Accessing the Diagnosis.....	99
5.5.1	Accessing Notifications .....	99
5.5.2	Display the Inverter Events .....	100
5.5.3	Handling Alarm Notifications .....	101
5.5.4	Optimizing the consumption of self-produced power .....	101
5.6	Using Data Transfer with USB .....	102
5.6.1	Create a Backup .....	102
5.7	Changing settings in the configuration menu.....	105
<b>6</b>	<b>Pac Correction Factor .....</b>	<b>106</b>
6.1	Calculating the PAC correction factor .....	106
<b>7</b>	<b>Using the Solar-Log WEB .....</b>	<b>108</b>
7.1	Registering for Solar-Log™ WEB "Classic 2nd Edition" .....	108
7.2	Accessing Plant data .....	111
7.3	Accessing Yield Data .....	115
7.3.1	How to navigate between different overviews.....	115

7.3.2	The meaning of the values in the overviews .....	115
7.3.3	Daily Overview .....	116
7.3.4	Monthly Overview .....	118
7.3.5	Annual Overview .....	119
7.3.6	Total Overview.....	120
7.3.7	Accessing and filtering the Event log .....	121
<b>8</b>	<b>Cleaning and care.....</b>	<b>123</b>
8.1	Cleaning tips .....	123
8.2	Care tips.....	123
<b>9</b>	<b>Notifications on the LCD Status Display (Solar-Log 300, 1200 and</b>	
	<b>2000) .....</b>	<b>124</b>
9.1	Meaning of the symbols on the LCD display .....	124
<b>10</b>	<b>Faults (Solar-Log 200, 500 and 1000).....</b>	<b>127</b>
10.1	LED status display (Solar-Log 200, 500 and 1000) .....	127
10.2	Troubleshooting faults oneself.....	128
10.3	Obtaining information from the Internet .....	129
10.4	Informing a specialist technician.....	130
<b>11</b>	<b>Disposal.....</b>	<b>131</b>
<b>12</b>	<b>Technical Data (Solar-Log 300, 1200 and 2000) .....</b>	<b>132</b>
<b>13</b>	<b>Technical Data (Solar-Log 200, 500 and 1000).....</b>	<b>138</b>
<b>14</b>	<b>List of figures .....</b>	<b>141</b>

# 1 General Information

---

This user manual is intended to assist you in the operation of the Solar-Log™. The yield data from the Solar-Log™ can be displayed in several ways:

- via a web browser in a local network (LAN) (Chapter 2)
- via the display (touch screen: only Solar-Log 1000, 1200 and 2000) directly on the device (Chapter 4 and 5)
- via the Internet (Chapter 7) or
- with the Solar-Log™ App (Chapter 8 and 9)

Our product documentation is being constantly updated and expanded.

The current versions of the documents can be downloaded from our website:

[www.solar-log.com](http://www.solar-log.com).

The descriptions in this manual refer to firmware version 3.4.0.

## 1.1 The necessary steps for precision monitoring of your PV plant with the Solar-Log™

- Connecting and detecting inverters, refer to the "Inverter Connection Manual" and the "Configuring Connected Devices" chapter in the [Installation Manual](#).
- Refer to the chapter "Configuring Connected Devices" in the [Installation Manual](#) for the configuration of inverters, generator power, MPP trackers and module fields.
- For configuring the notification function and status messages from the inverter, refer to the "Configuring Notifications" chapter in the [Installation Manual](#).
- Activating and configuring performance monitoring, refer to the "Configuring Notifications" chapter in the [Installation Manual](#).

### Note:



The Solar-Log needs a continuous supply of electricity to avoid data loss and to ensure precision monitoring of the PV plant

## 2 Operating via a web browser within your own network

---

### 2.1 Requirements

#### Information



For faster access, enter "solar-log" in the address bar of the web browser and create a bookmark.

#### In a local network (LAN)

To operate the Solar-Log™ via a web browser, you will need to be on a computer that is connected to the same local network (LAN). This computer will also need to have a modern web browser installed on it. The Solar-Log™ unit also has to be connected to this network with the proper network settings.

#### Via the Internet

In addition to the computer with a web browser, you need an active Internet connection as well as a user account on a server.

To set up a user account, please contact your installer or see our website for more information:

<http://www.solar-log.com/en/products-solutions/solar-logtm-web.html>

#### Note



Requests and control commands are sent to the inverters, battery systems and intelligent appliances via the network interface. For this reason, the network should always be available (24/7). If the Solar-Log™ is connected via WiFi, we recommend deactivating the overnight shutdown function.

## 2.2 Overview

### 2.2.1 General Navigation

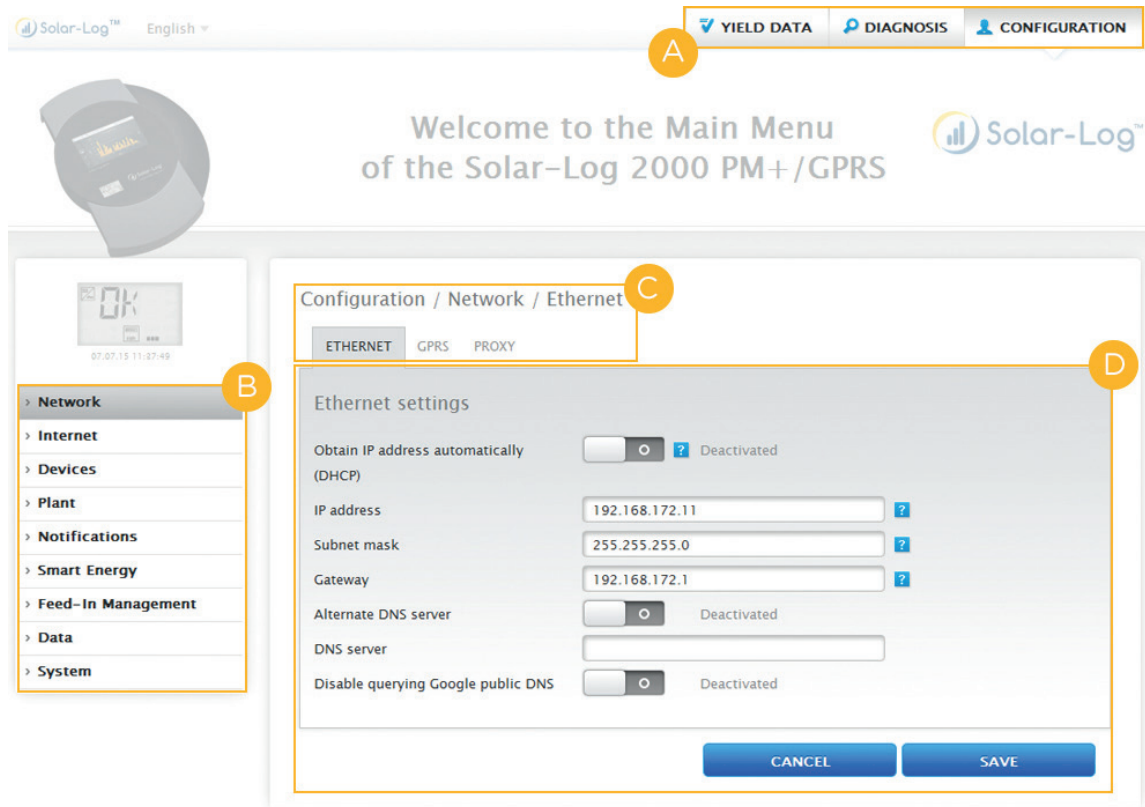


Fig.: Navigation designations

The start page contains the following sections:

- Header bar (A)
- Left navigation (B)
- Tabs (C)
- Configuration page (D)

#### Header bar

The header contains three main sections:

- **Yield data:**  
Here you will find your plant's yield overview within certain periods of time such as day, month, year and the total yield to date.
- **Diagnosis:**  
Here you can view the fault and process messages while filtering them according to specified criteria.
- **Configuration:**  
Here you can change the device settings as required.

#### Left-side navigation menu

Depending on the tab selected, you can access additional functions from the navigation menu (left-side).

#### Tabs

Additional configuration sections appear according to the function selected.



### Configuration Page

Here you can make necessary configurations for the optimal monitoring and evaluation of your plant. You can also view information on the power output, yields and the device.

### Log in button

You can entered a password protected section by clicking on the log in button (at the bottom right corner of the screen) and entering your user and password. On the right side on the bottom, there is a blue line next to the log in button which indicates if you are logged in and with which user level. (Refer to the [Access Control](#) section for more information)

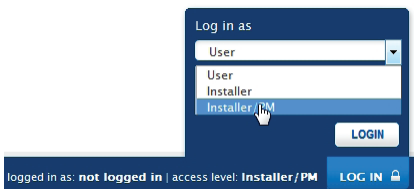


Fig.: Log in button with selection box

### Hide arrow

The "Hide Arrow" (on the right of the header bar) allows you to increase the amount of the page displayed in the browser by hiding the Welcome header.

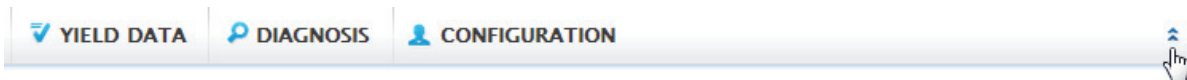


Fig.: Header bar with the "Hide Arrow"

### New Firmware

A notification is sent via the Web browser when a new firmware is version available; a green triangle with an exclamation mark is displayed at the top in the status line. (See illustration: Signal for new firmware)

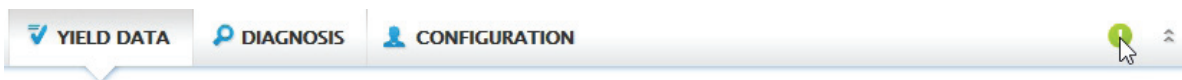


Fig.: Signal for new firmware

### Note



The [Automatic Firmware Update Check](#) has to be activated in the [Configuration | System | Firmware](#) menu to use this function. (See illustration: Automatic Firmware Update Check with notification text displayed)

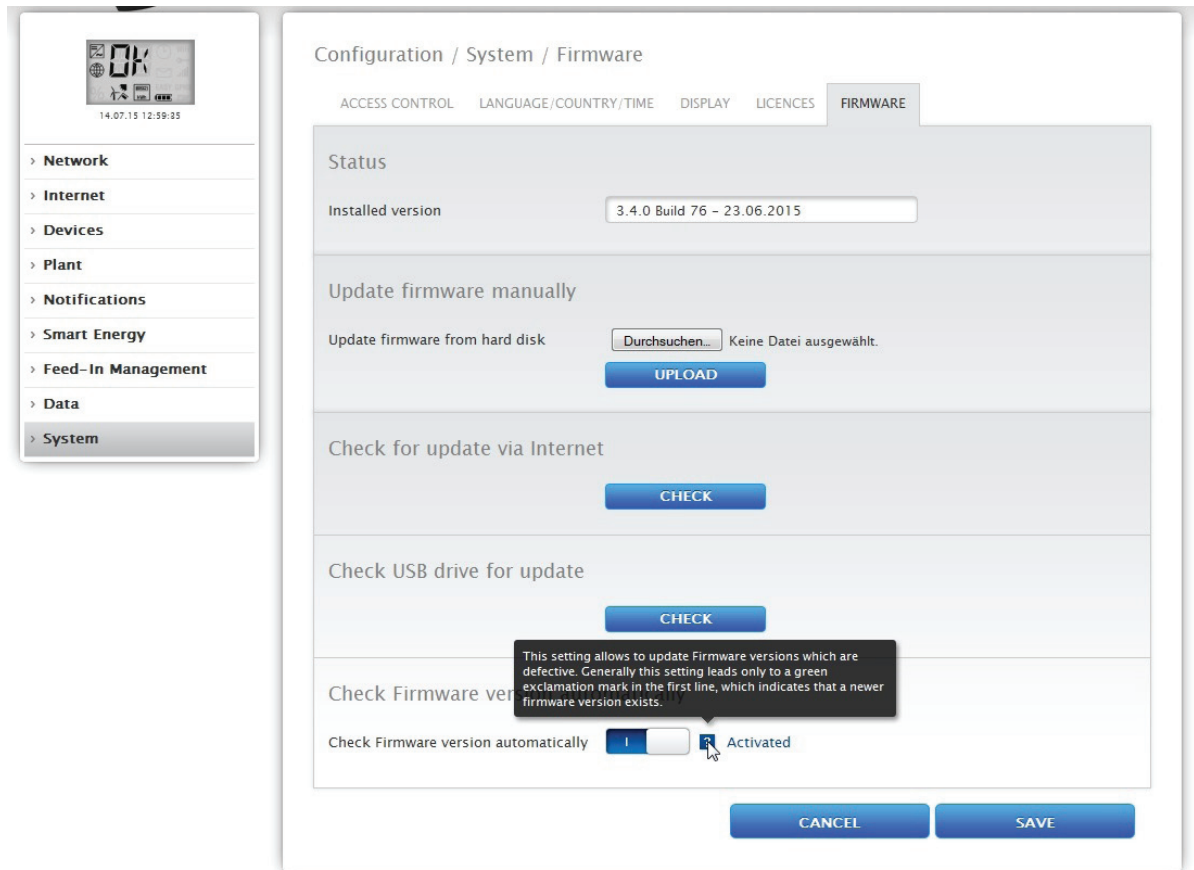


Fig.: Automatic Firmware Update Check with notification text displayed

The following notification text is displayed by clicking on the question mark:

"This settings allows firmware versions with critical errors to be automatically updated. However, generally, this setting only indicates that a new firmware version is available (green exclamation mark at the top).

Clicking on the green exclamation mark in the header displays the following window:

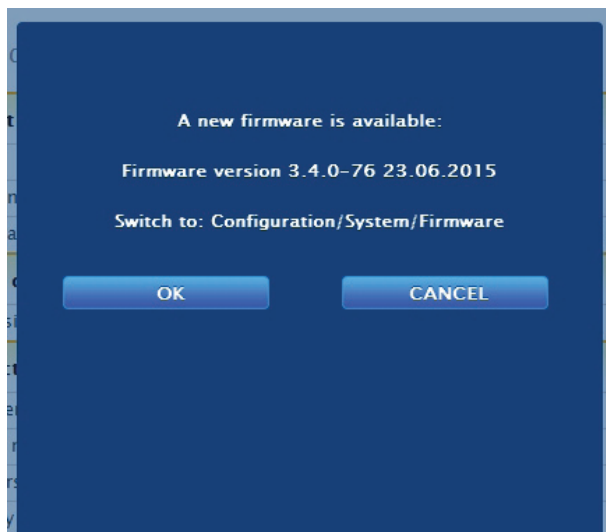


Fig.: Window displayed indicating that a new firmware version is available

Selecting "OK" redirects you to the page of the Solar-Log™ for firmware updates. Selecting "Cancel" closes the window.

## Access control

Access protection for different parts of the Solar-Log™ can be configured in this menu. The following sections can be restricted with a pin code or password.

- Access protection for the display
- Access protection for the browser menu
- Displaying advanced configuration

Access protection for the display (only Solar-Log 1000, 1200 and 2000)

A pin code can be activated to restrict access to the Solar-Log™'s display. The pin code may contain a maximum of 8 numerical digits.

Access at the display can be restricted for the entire display or just the settings section.

**Procedure:**

- Enter the **pin code**
- Enter the **pin code again**
- **Select** restricted **Sections** by checking them.
- **SAVE** settings

## Access protection for the browser menu

In this section, the following parts of the Solar-Log™'s browser menu can be restricted with a password:

- User  
General access to the **Browser menu**
- Installer  
Access to the **Configuration menu**
- Feed-in management  
Access to the **Configuration | Feed-in Management menu**

The default password for access to the Feed-in Management menu is PM. Access for users and installers is not restricted.

### Note



We advise installers to discuss with their customers the scope of the settings in the area of feed-in management, to block the configuration menu using a password and to assign an individual password.

### Procedure

- **Activate** the password restriction for the desired menus.
- Enter a **secure password** for each of the menus.
- Enter the password again.
- **SAVE** the settings.

## 2.3 Accessing the Start page

Start your web browser and enter "solar-log" in the address bar of the web browser or select the bookmark in the browser's navigation bar. If there are several Solar-Log™ devices connected to the network, enter http://solar-log-wxyz in the address bar. Here "wxyz" stands for the last 4 digits of the serial number of the Solar-Log™.

- The welcome screen is displayed.

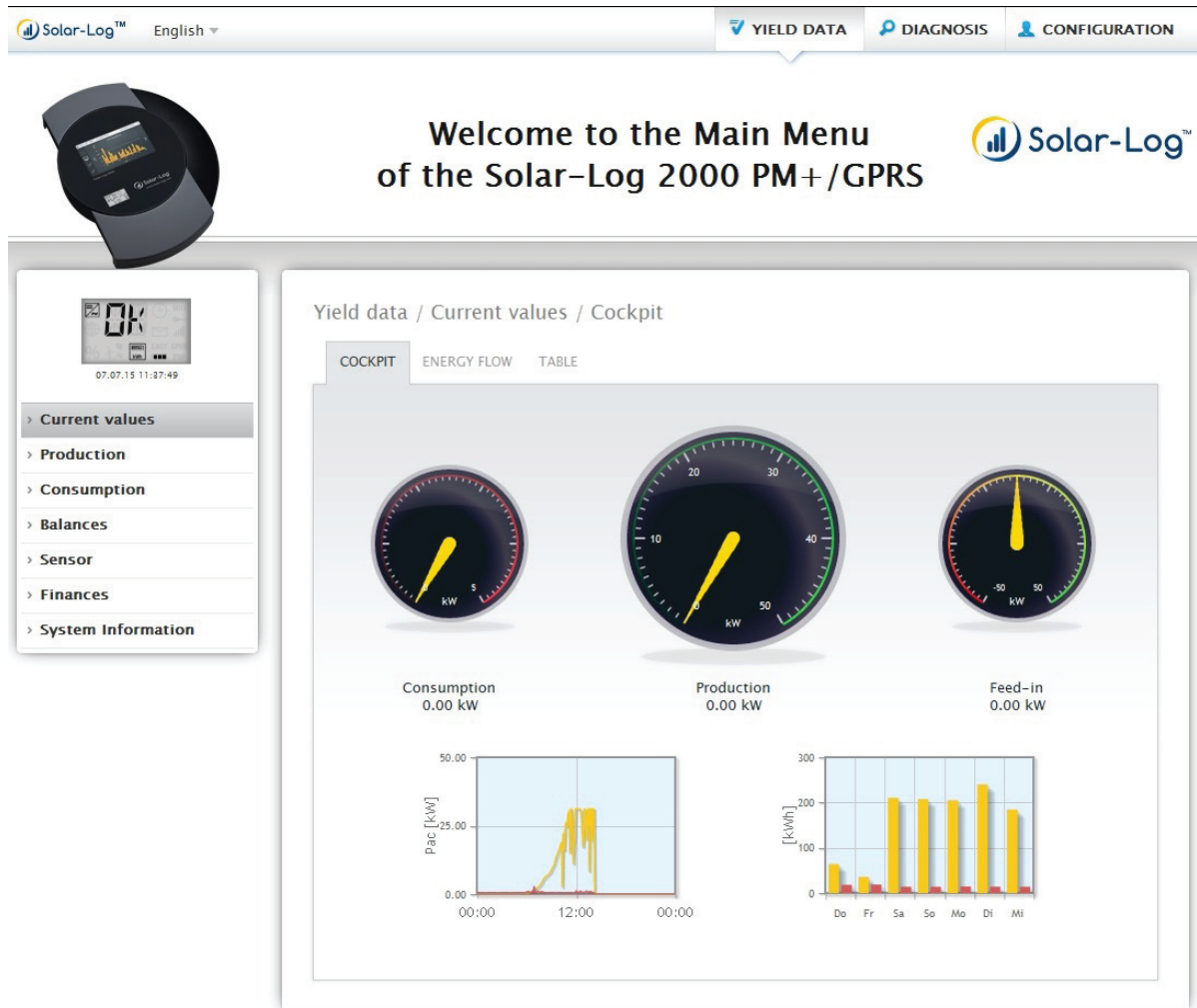


Fig.: Welcome screen

From the start page, the following navigation menu can be selected from the header bar:

- Yield data
- Diagnosis
- Configuration

The subsections in the in the tabs:

- Cockpit
- Energy flow
- Table

These are also located on the left side of the of the VLCD Display (see "VLCD Display" section for more details) and in additional sub-menus (depending on connected the devices) and as a selection in the main navigation menu.

## VLCD Display

The VLC Display is located above the left navigation menu and displays the notifications from the Solar-Log™ in the form of codes and symbols in addition to the date and time. The codes and symbols correspond to those for the LCD display. (Refer to the illustration "VLCD Display" and the chapter "Meaning of the symbols on the LCD display")

The notifications are in real-time and are identical to those on the Solar-Log™ LCD Display. (Solar-Log 300, 1200 and 2000) (Also refer to the chapter "Notifications on the LCD Status Display")



Fig.: VLC Display

## 2.4 Accessing Yield Data

Access the [yield data](#) from the [header bar](#).

The following options can be selected from the left-side navigation menu.

- Current values
- Production
- Consumption (only appears when a consumption meter is connected)
- Balances
- Finances
- Sensor (only appears when a sensor is connected)
- System Information

### 2.4.1 Current values

The [Cockpit](#) tab can be automatically selected from the [Current values](#). The Dashboard view of the plant includes the following values:

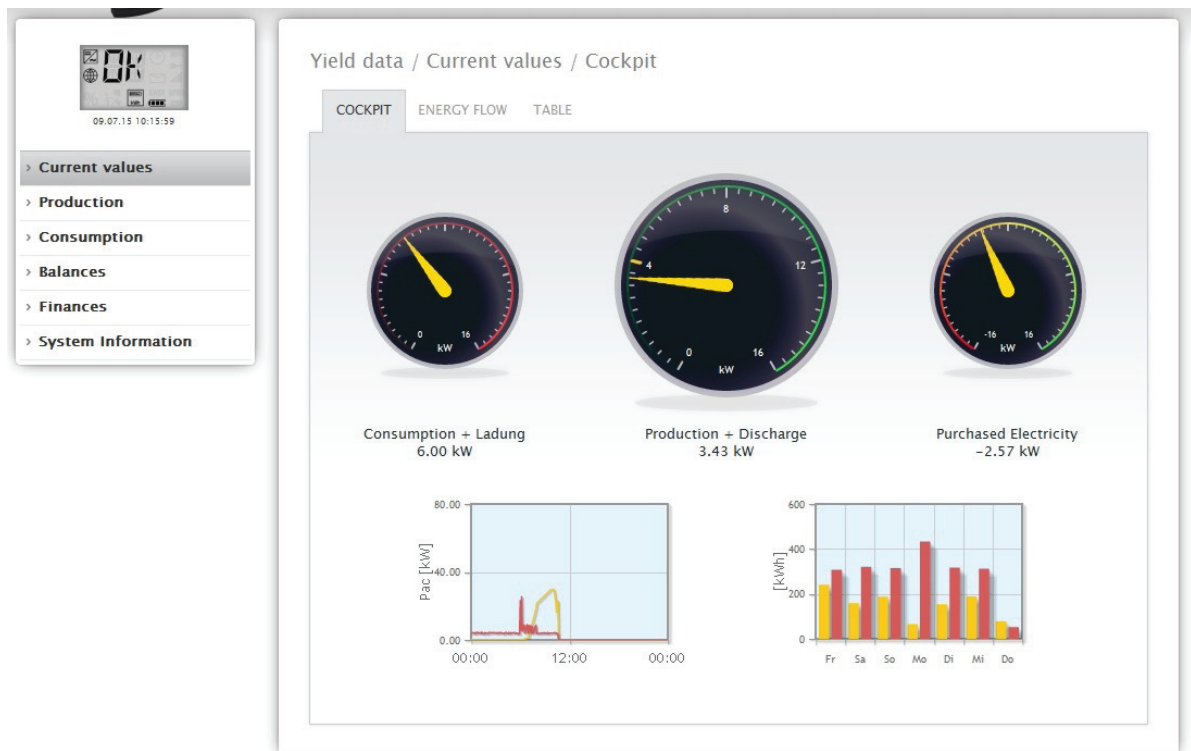


Fig.: The plant's current values (cockpit view)

- Consumption (only when consumption meters are connected). Displays the current consumption.
- Production (power generated by the plant) + discharge \*only with a connected battery system) displays the current production and battery discharge.
- Feed-in amount (only when meters are connected). Displays the power output that is currently being fed into the grid.

There are two graphs located below the Dashboard display:

- The current day curve (graph on the left). There is also the option to display the previous five days as a curve in this graph. Therefore, just click on the day value in the graph on the right.
- The current day value as well as those from the previous 5 days (graph on the right). Move the mouse above one of the bars to display the day value. Click on one of the bars to have it display in the graph on the left as a curve.

Additional tabs can be selected in this view:

- Energy flow
- Table

Note!



If the Solar-Log™ is just used as a consumption monitoring tool, the menu is limited to **Current values**, **Consumption** and **System information**. All of the other menus are hidden.

Note!



When only consumption meters are connected to the Solar-Log™, a large consumption tachometer is displayed instead of the production tachometer in the **Current values | Cockpit** menu.

## 2.4.2 Energy flow

The plant is displayed as a flow graphic in the Energy flow tab.

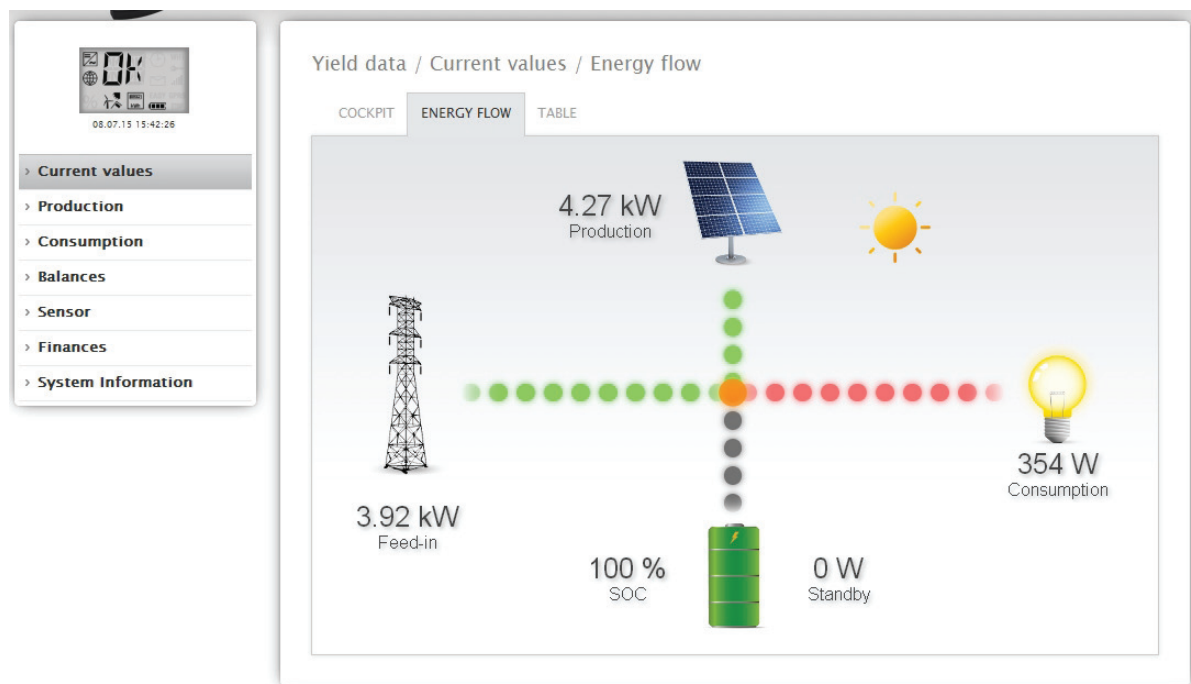


Fig.: Example of a plant with an energy flow

Depending on the particular devices connected, the following values are displayed in the flow graphic in real time:

- Production (W)
- Consumption (W)
- Grid fed (W)
- Battery Status
  - Charge Status (%)
  - Standby (W)

### 2.4.3 Table

The output recorded from the connected devices is displayed as a table in Table tab.

Yield data / Current values / Table

COCKPIT ENERGY FLOW TABLE

Inverters		Power	Status
WR 1		5947 W	MPP

Consumption meter		Power	Status
Consumption		264 W	RUNNING
Freezer Cabinet		187 W	RUNNING
Air Condition		22 W	RUNNING

Sensor	Irradiation	Status
Sensor	438 W/m <sup>2</sup>	DATA

Battery	Charge / Discharge	SOC [%]	Status
WR 1	2922 W / 0 W	<input type="checkbox"/> 60	MPP

Fig.: Table with the recorded output from an example plant

Depending on the particular device connected, the following values are displayed:

- The current output from each individual inverter.
- The total current consumption as measured by the consumption meters.
- The current irradiation per m<sup>2</sup> as measured by the sensor.
- The values from the battery with the columns Charge/Discharge, Charge Level (%) and Status.



## 2.5 Production

You can select a graphic display of your plant's production from the **Production** menu.

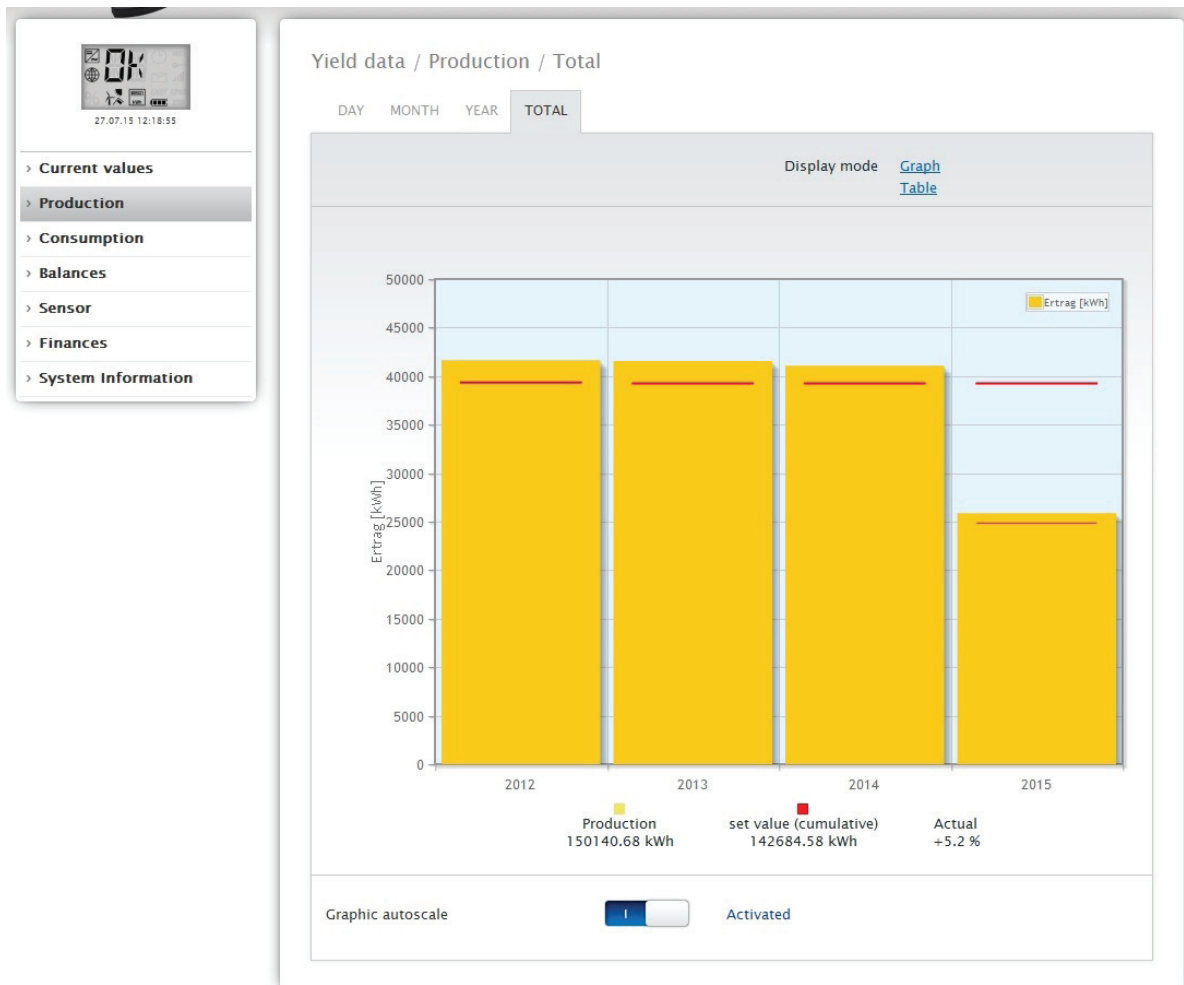


Fig.: Graphic display of the plant's total production

You can select the following tabs from this display:

- Day
- Month
- Year
- Total

You can select to display the view as a **graph** or **table**. The actual values displayed in the graph or table depend on the view selected.

### Note!



The auto scaling option always scales the graphics up as much as possible in the yield data section. The auto scaling can be manually disabled for the respective graphics. Then the scaling is done based on the value defined in the device configuration. Please refer to the the chapter on configuring inverters in the Installation Manual.

## 2.5.1 Day view

The **Day** tab displays the current day as a curve graph. The **output (W)** and **yield (kWh)** values, at the top left of the graph key, can be hidden and unhidden by clicking on them.

The different values throughout the day can be displayed by moving the mouse along the curve.

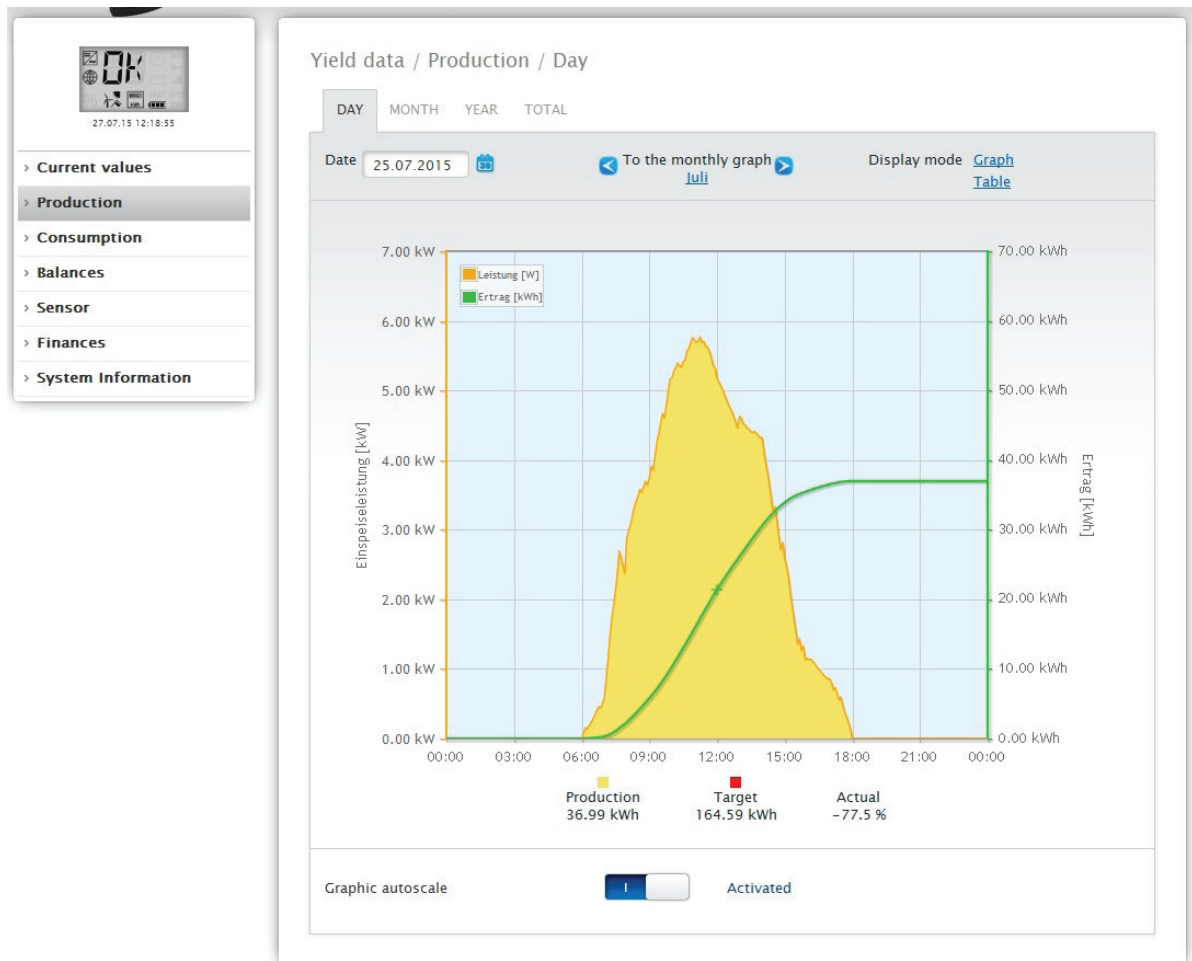


Fig.: Daily View of the Production Graph with the Auto Scaling activated

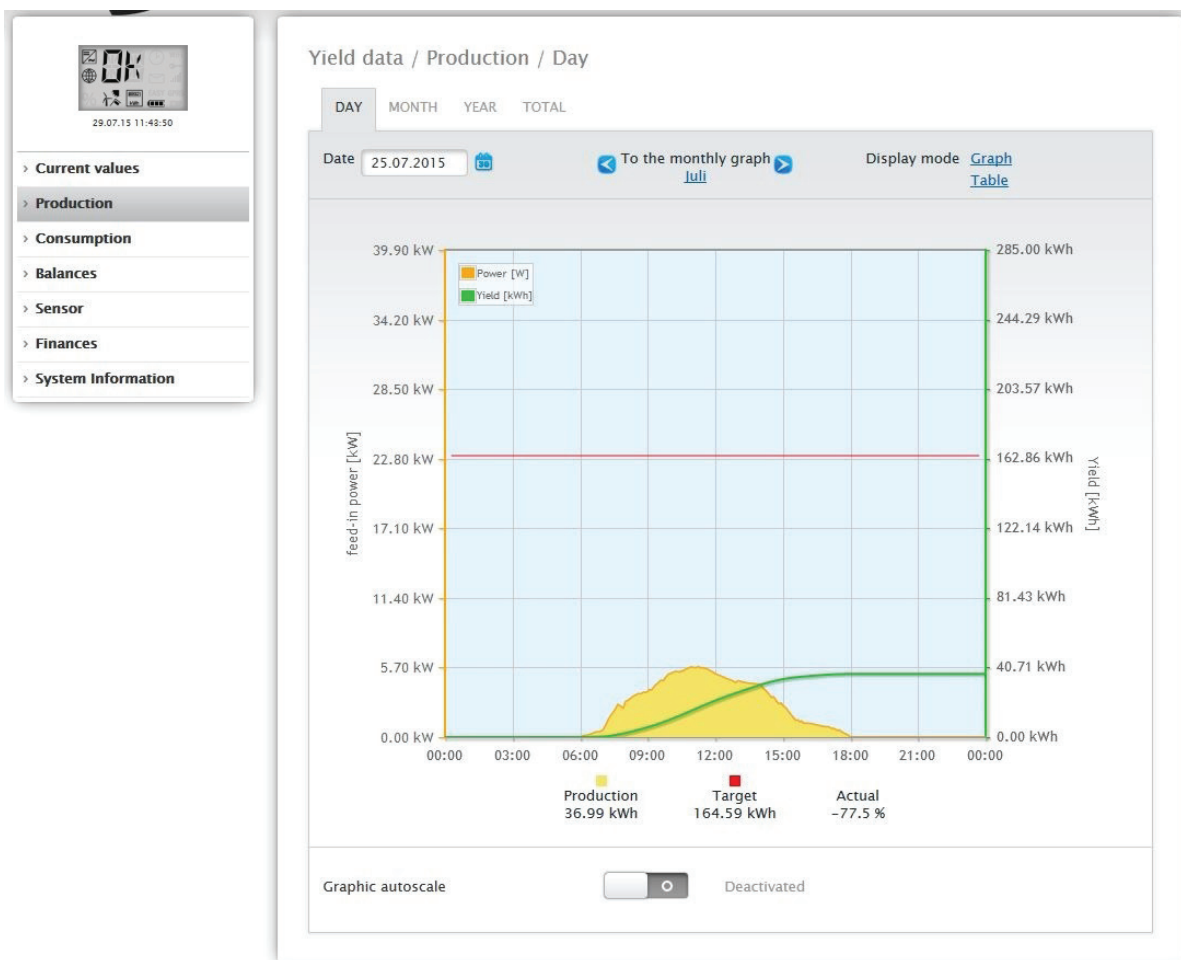


Fig.: Daily View of the Production Graph with the Auto Scaling deactivated

Different values with different units are displayed in the graph. The units used and their colors are defined in the key at the top.

Yield data / Production / Day

DAY MONTH YEAR TOTAL

Date: 25.07.2015 [To the monthly graph Juli](#) Display mode: [Graph](#) [Table](#)

Inverter	Name	Yield	Specific Yield
0	INV 3	12.33	0.84
1	INV 1	12.33	0.84
2	INV 2	12.33	0.84
Total		36.99	0.84

Fig.: Day view of the production table

When you click on **Table**, the values from the current output generated will be allocated to the individual inverters and displayed as a table. In this way, you can check the output of every inverter at any time.

## 2.5.2 Month view

The tab **Month** displays the daily yields from the month as a total in a bar graph.

- The daily yield can be displayed by moving the mouse above one of the bars.
- Click on a bar to go to the corresponding day view.

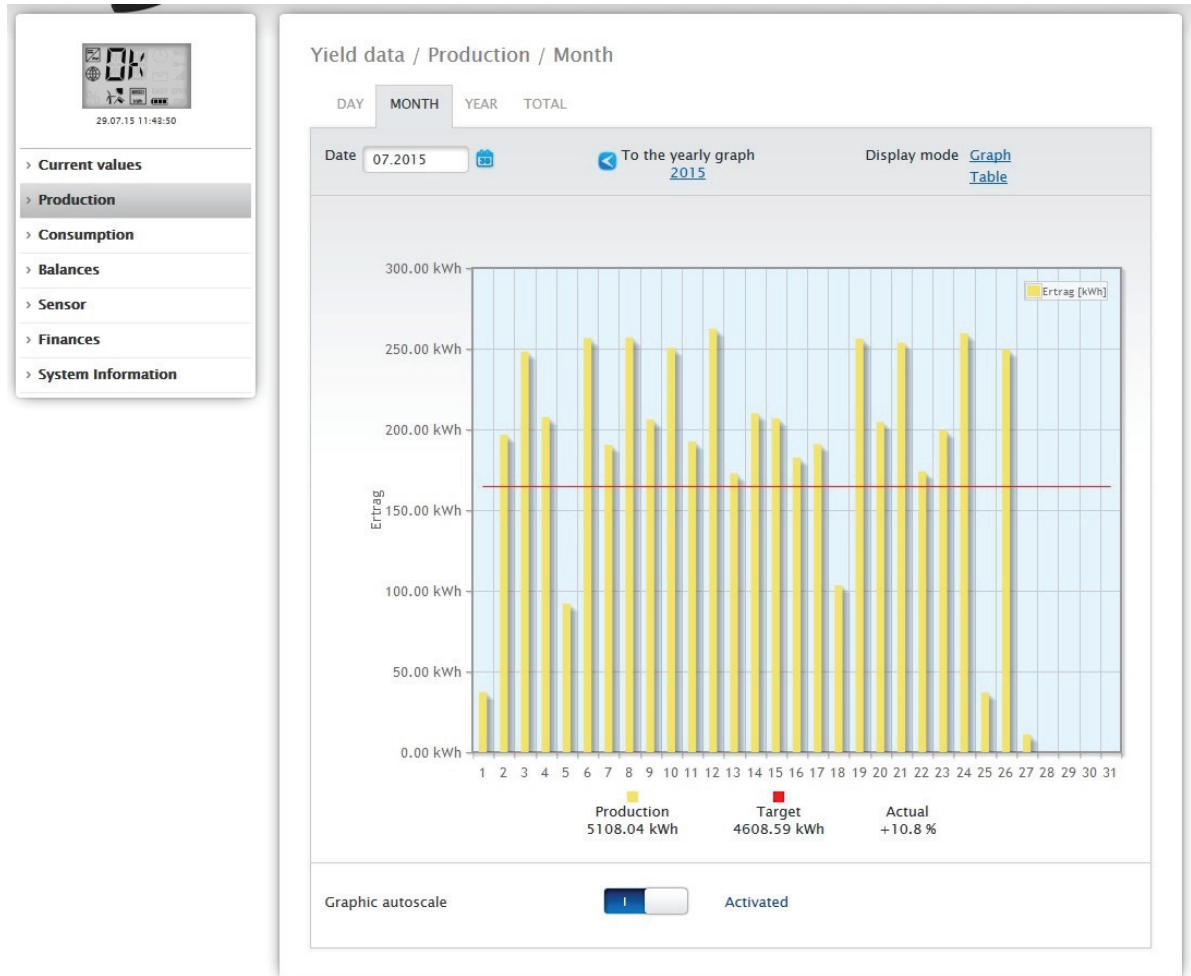


Fig.: Month view production graph

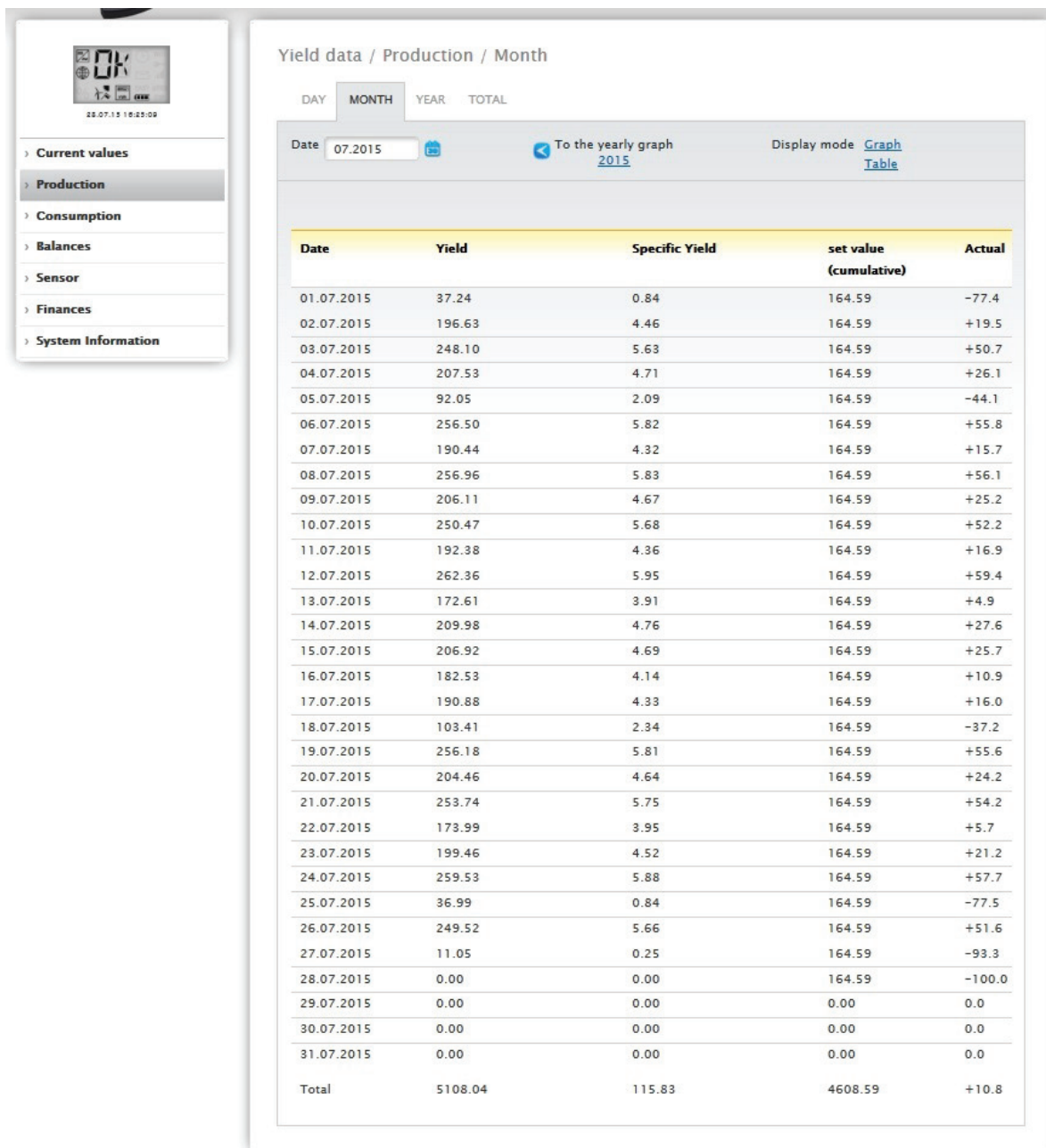


Fig.: Month view of the production table

When you click on [Table](#), the values: date, yield, specific yield and target (cumulative), current and target are listed for the entire month.

### 2.5.3 Year view

The tab **Year** displays the monthly yields from the year as a total in a bar graph.

- Move the mouse above one of the bars to display the monthly yield with a comparison of the current and target values in regard to the annual forecast.
- Click on a bar to go to the corresponding month view.



Fig.: Year view graph

When you click on **Table**, the annual values for the entire year are allocated to each month according to the actual output generated.

## 2.5.4 Total view

The **Total** tab displays the annual yields as a total in a bar graph. The red line displays the calculated target balance based on the annual forecast.

- Move the mouse above one of the bars to display the annual yield with a comparison of the current and target values in regard to the annual forecast.
- Click on a bar to go to the corresponding year view.

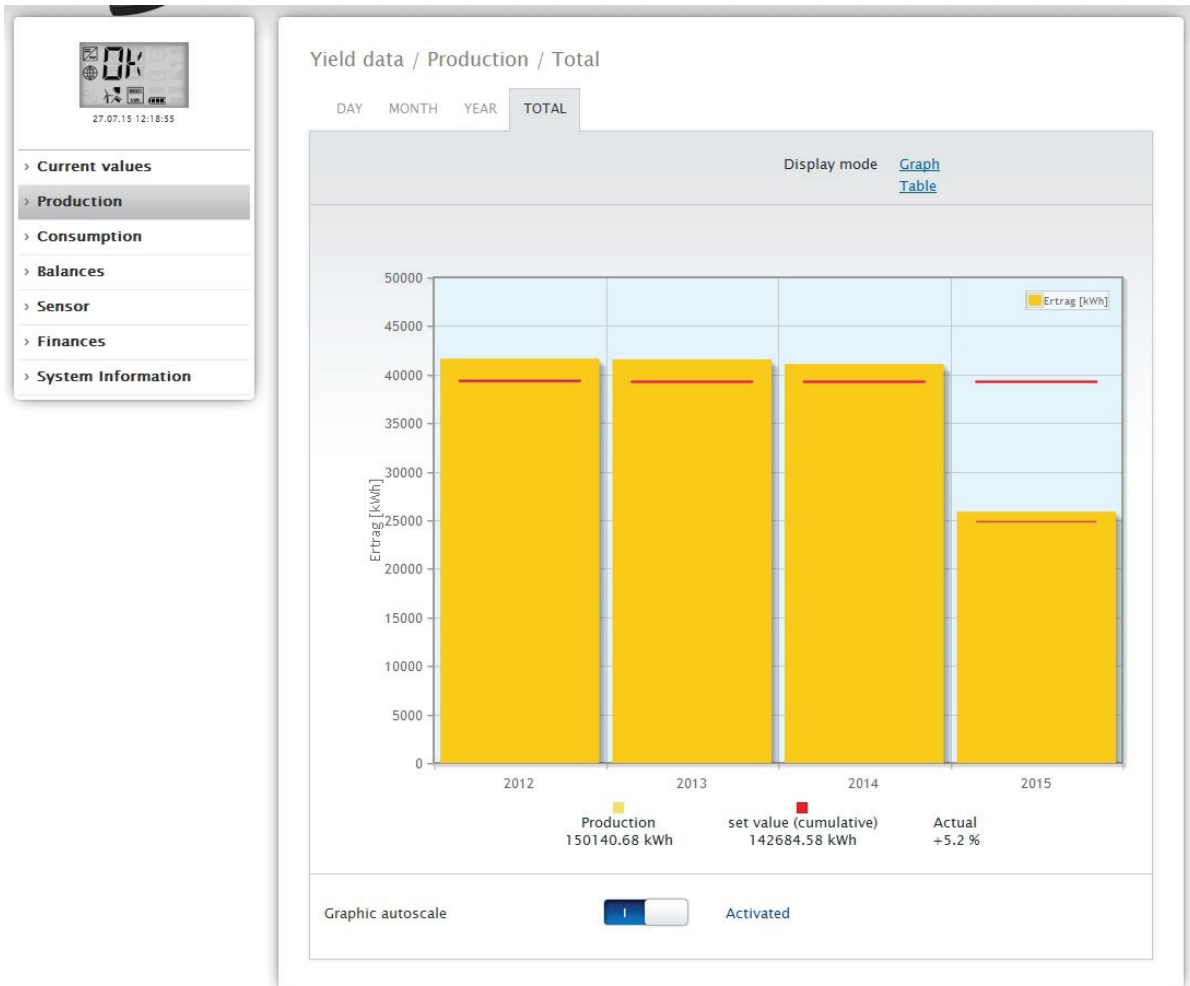


Fig.: Total view graph

### Table:

The plant's total power output (since the monitoring started) is allocated every year according to the output generated.

The **Date** box is included in the **day**, **month** and **year** view and has a calendar function with which you can search for certain days, months or years according to the view selected. You can go backwards and forwards within the selected period with the arrow keys for the previous day or week, or for the following day or week.

## 2.6 Consumption

From the **Consumption** menu, you can view the exact consumption from appliances that are connected via networked "smart plugs" with the Solar-Log 1200 and 2000, relays or the Solar-Log™ Meter.

### Note!



Consumption is only displayed once a meter is connected.

The day view can be selected from the **Consumption** menu. The view appears as a **Day Graph** with the total consumption values.

As soon as sub-consumers are connected, e.g. a washing machine or freezer, the view expands to include the tab **Details Sub-consumers**.

All of the appliances consuming electricity are shown in different colors here and they are also displayed as in a pie chart at the bottom with the colors in the key.

It is also possible to display the Daily Consumption graphic as a line graphic. (However, this view can be configured after "**Display advanced configuration**" has been activated in the **Configuration | System | Access control** menu. There is the option to display or hide the consumption from particular appliances in line graphic view.



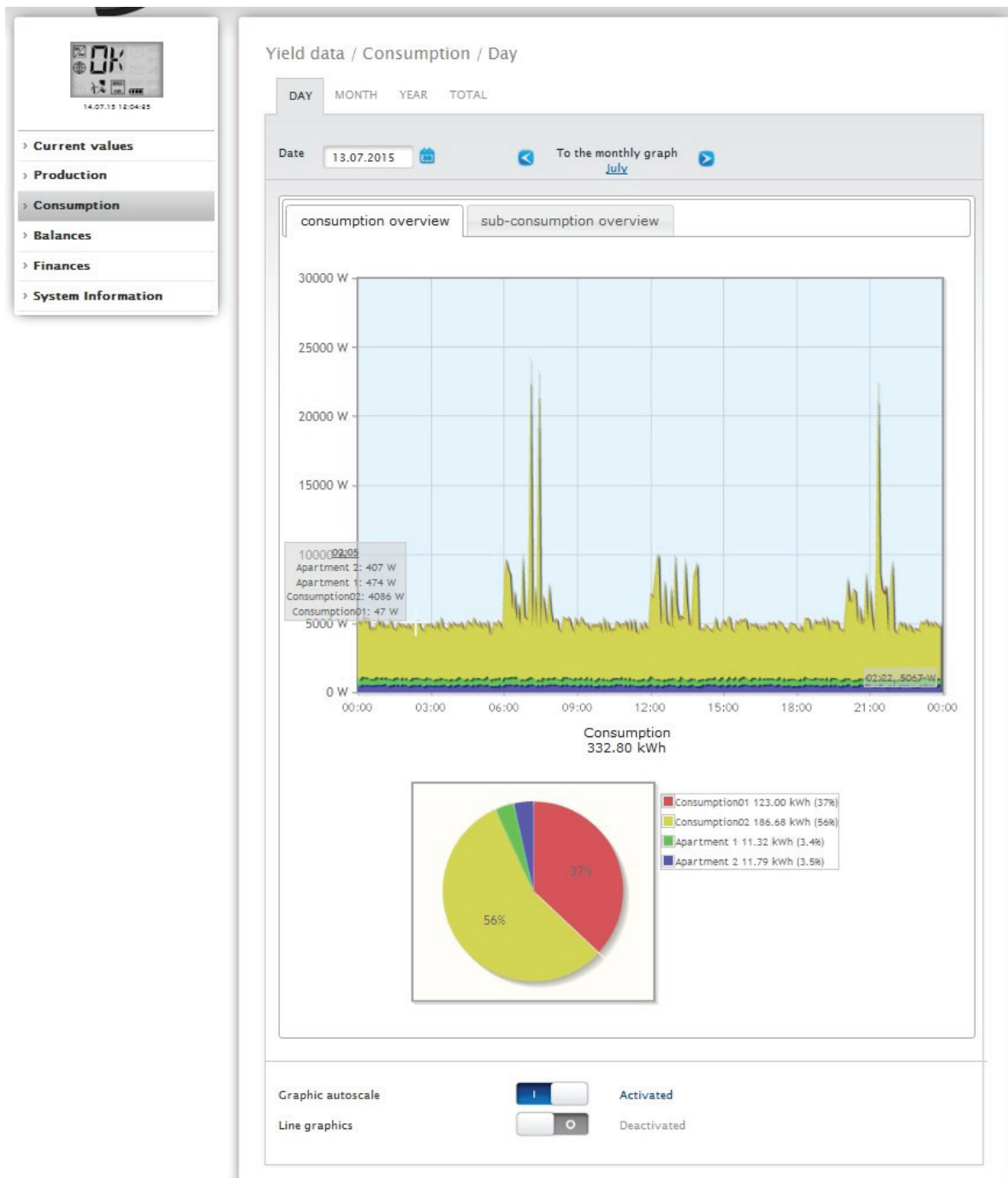


Fig.: Graph of daily consumption with meters connected

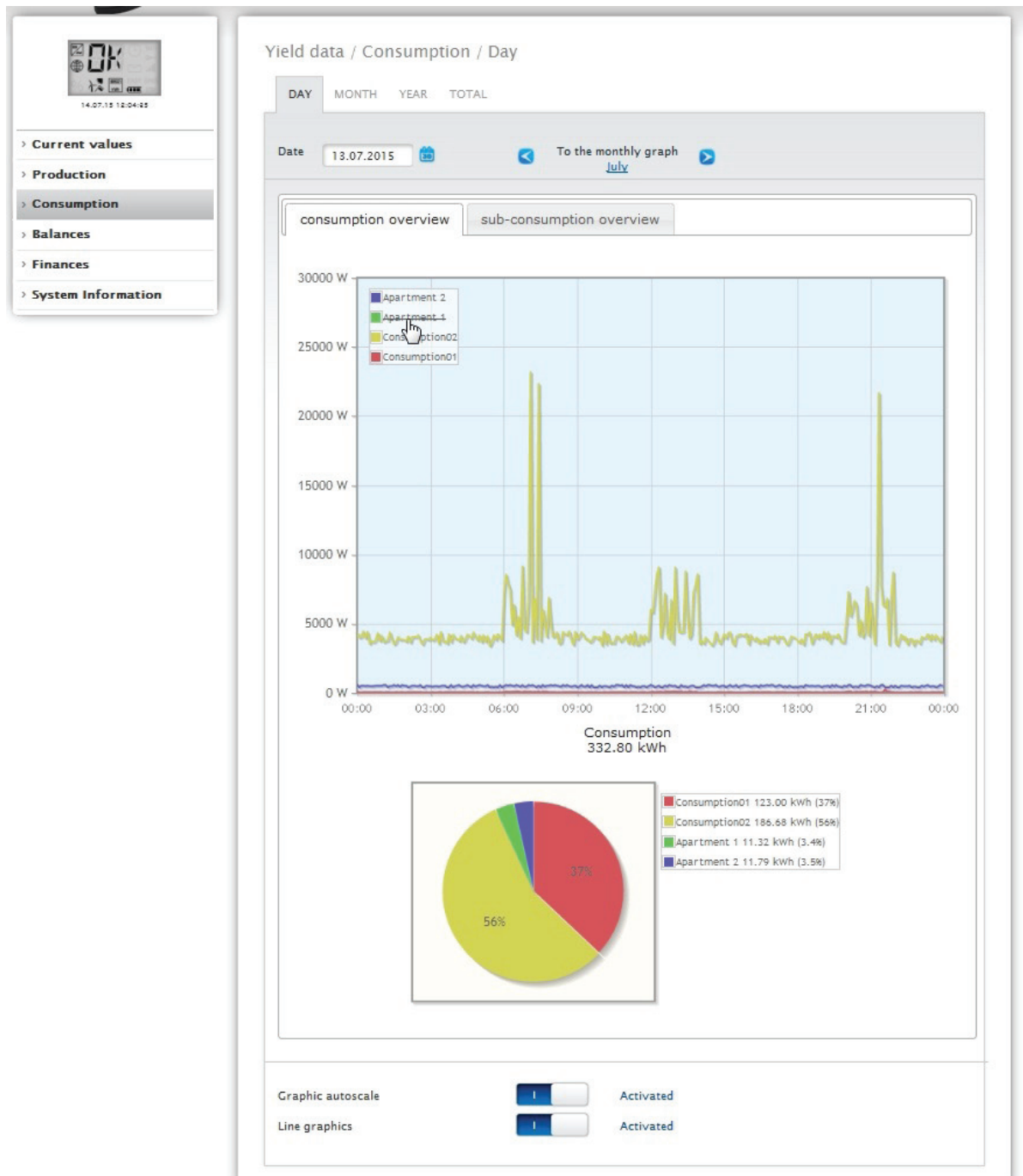


Fig.: Graph of daily consumption with meters connected and active line graphics

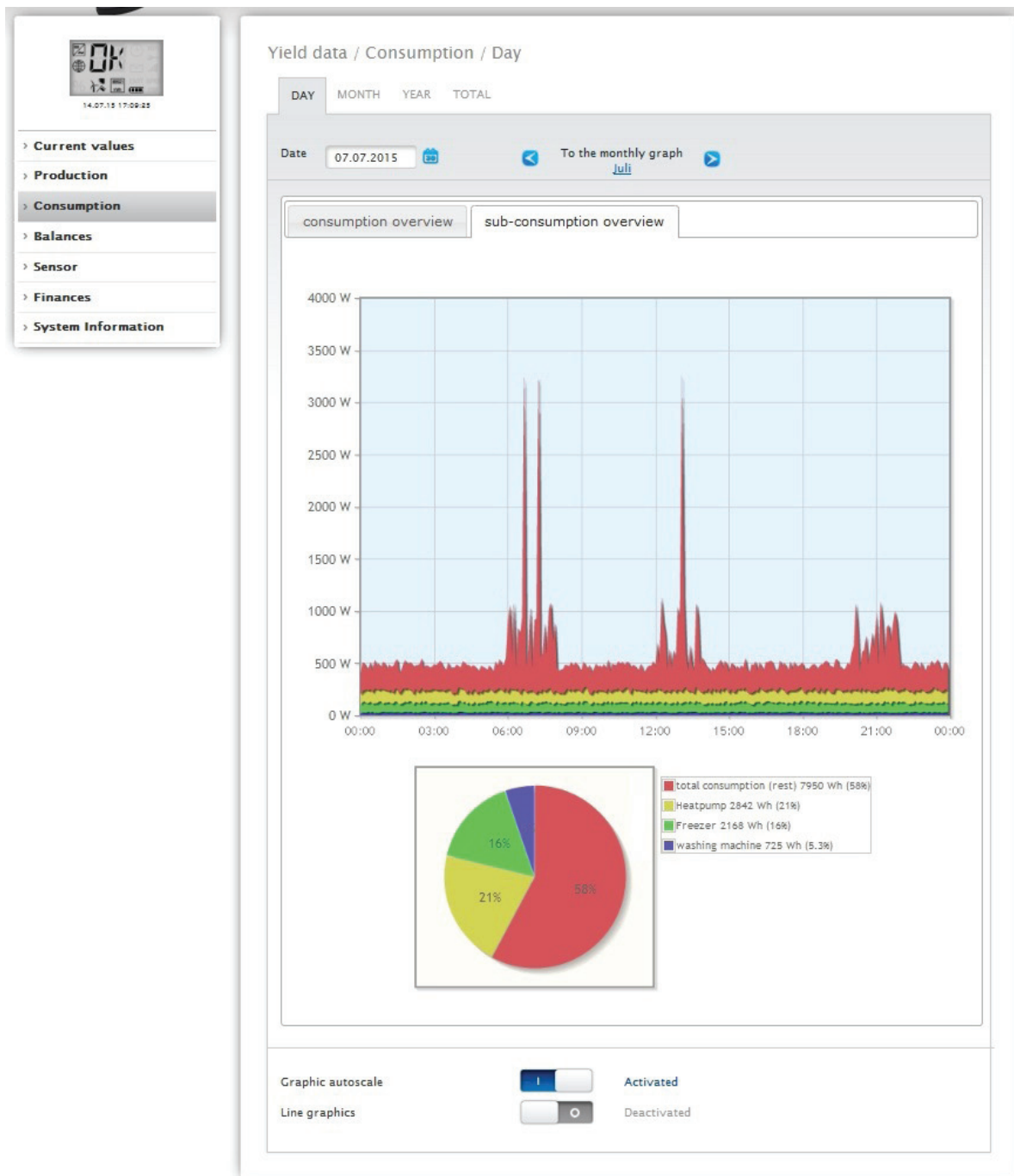


Fig.: Graph of daily consumption with connected appliances in the sub-consumer view

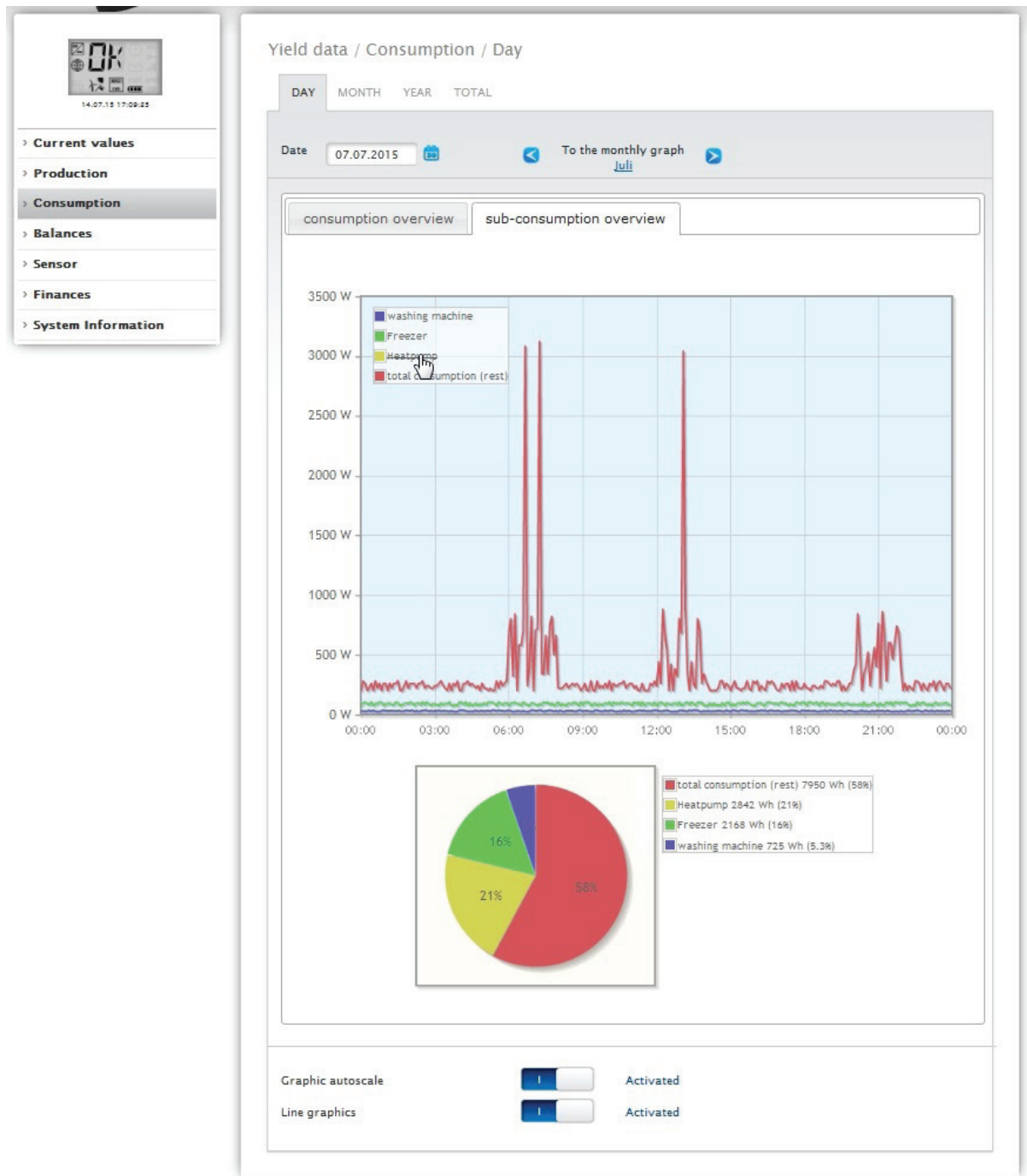


Fig.: Graph of daily consumption with connected appliances and active line graphics in the sub-consumer view

You have the option to select additional menu items in the consumption view.

- **Month:**

displays the Month Graph View as a bar graph. There are two tabs in the Month View, the same as in the Day View:

The **Consumption Overview** and the **Sub-consumer Overview**.

The total consumption values are displayed in the Consumption Overview as a bar graph.

In the **Sub-consumer Overview**, you see the devices connected as a bar graph with the power consumption displayed in different colors. Below this, the values are also displayed in a pie chart with the colors in the key.

There is the option from both views to select the individual days directly from the individual bars and sections.

- **Year:**

displays the Year Graph View as a bar graph. There are two tabs in the Year View, the same as in the Month View:

The [Consumption Overview](#) and the [Sub-consumer Overview](#).

The total consumption values are displayed in the Consumption Overview as a bar graph.

In the [Sub-consumer Overview](#), you see the devices connected as a bar graph with the power consumption displayed in different colors. Below this, the values are also displayed in a pie chart with the colors in the key.

There is the option from both views to select the individual months directly from the individual bars and sections.

- **Total:**

displays the Total Graph View as a bar graph. There are two tabs in the Total View, the same as in the Year View:

The [Consumption Overview](#) and the [Sub-consumer Overview](#).

The total consumption values are displayed in the Consumption Overview as a bar graph.

In the [Sub-consumer Overview](#), you see the devices connected as a bar graph with the power consumption displayed in different colors. Below this, the values are also displayed in a pie chart with the colors in the key.

There is the option from both views to select the individual years directly from the individual bars and sections.

## 2.7 Balances

You can see the relationship between your plant's production and consumption from the [Balances](#) menu.

The following points are displayed in all of the views (day, month, year and total):

- Production
- Consumption
- Self-consumption

The following points are additional displayed when a battery system is connected (see Fig.: Day Balance graph with battery system):

- Self-consumption Battery (kWh)
- Charge (kWh)
- Discharge (kWh)

### Note!



The consumption as well as the values from the battery are only displayed once the systems are connected (consumption meter + battery system).

### Note!



The auto scaling option always scales the graphics up as much as possible in the yield data section. The auto scaling can be manually disabled for the respective graphics. Then the scaling is done based on the value defined in the device configuration. Please refer to the the chapter on configuring inverters in the Installation Manual.

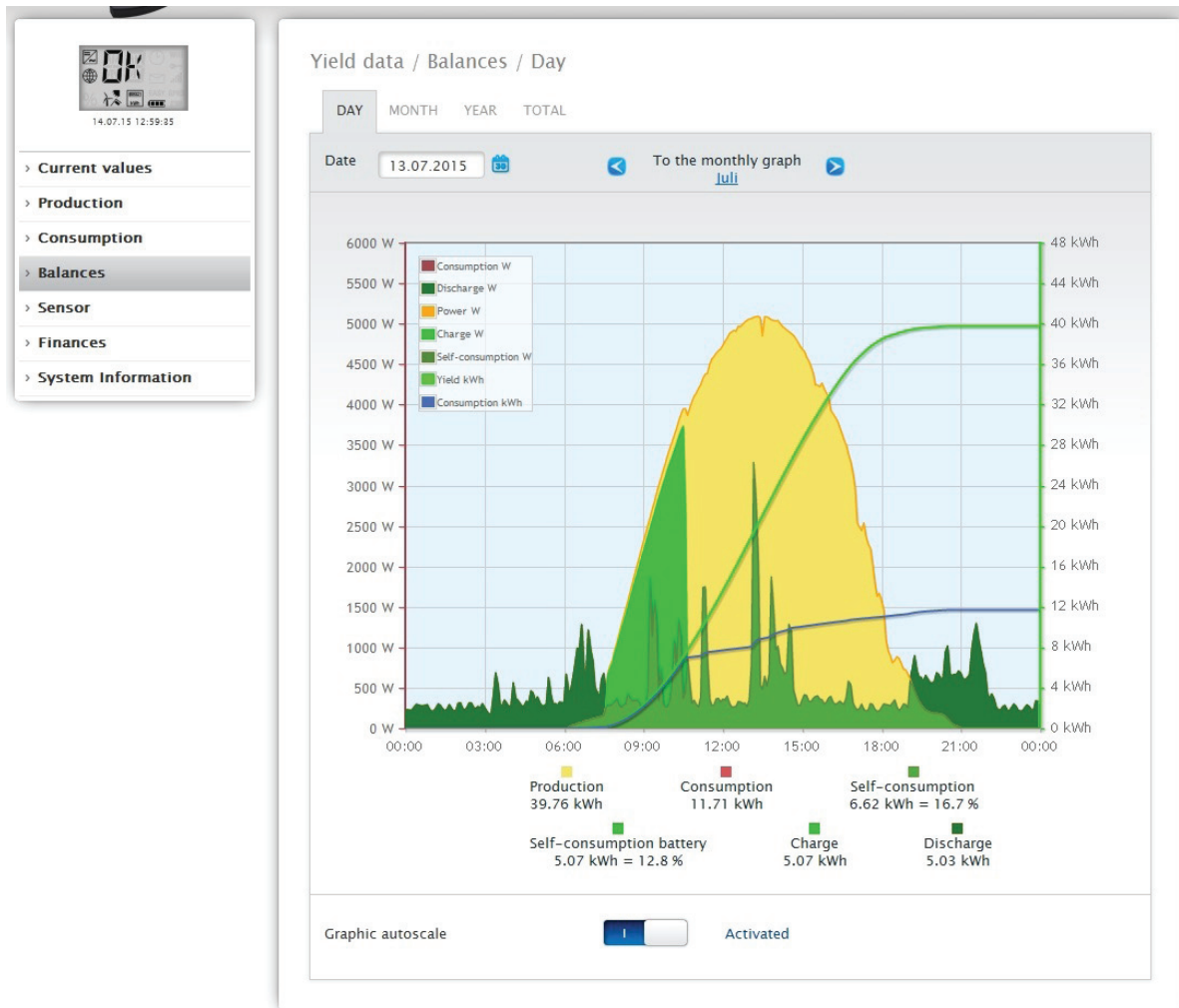


Fig.: Day Balance graph with battery system

The following tabs can be selected:

- Day
- Month
- Year
- Total

The start view displays the current daily values as a graph.

## 2.7.1 Day balance

The **Day** tab under Balances displays the production, consumption and self-consumption side-by-side as a day curve. The values at the top left of the graph key can be hidden and unhidden by clicking on them. Different values with different units are displayed in the graph. The units used and their colors are defined in the key at the top.

The different values throughout the day can be displayed by moving the mouse along the curve.

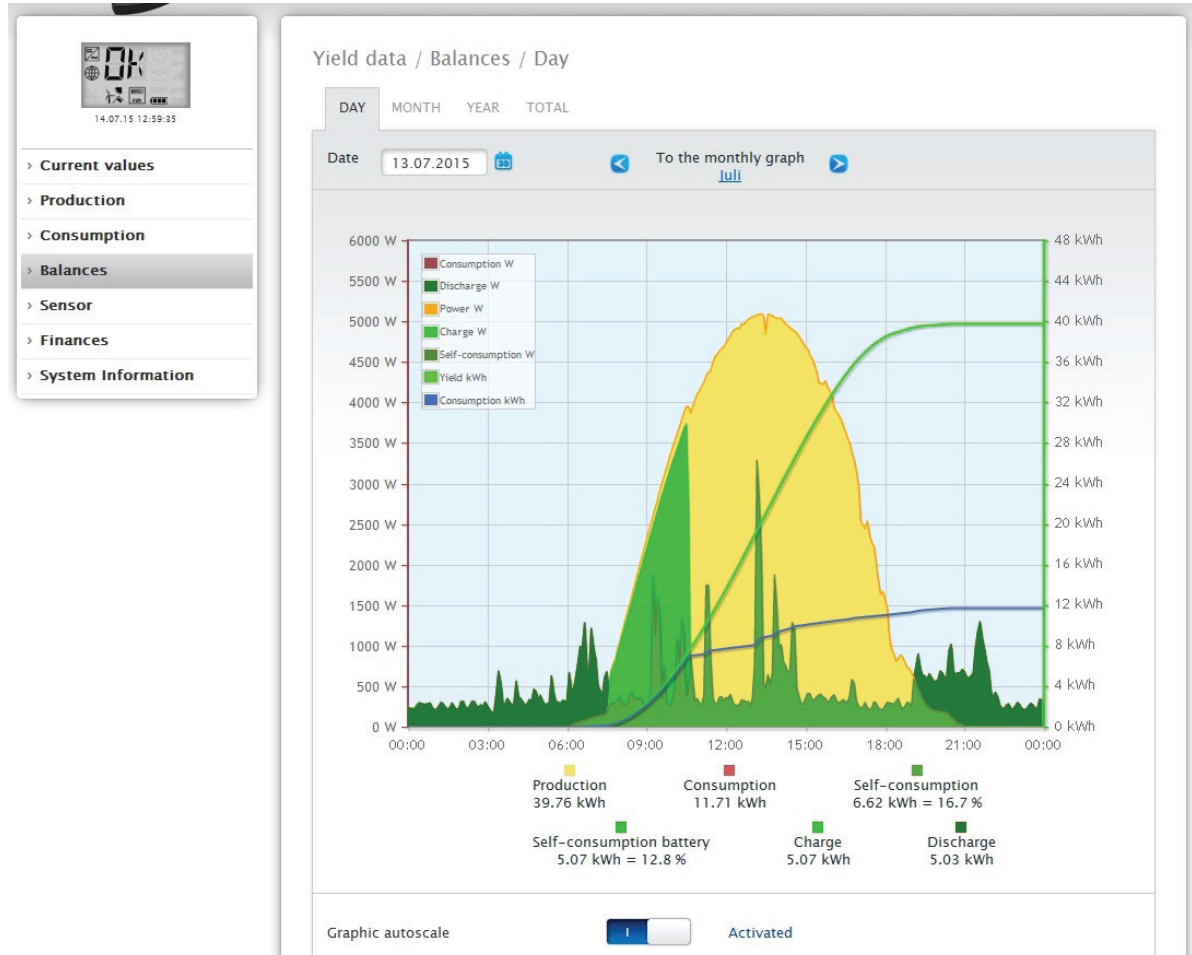


Fig.: Daily Balance Graph with the Auto Scaling activated

The meaning of the colored areas in the day curve:

The green areas display the amount of consumption that was covered with PV power. The yellow areas display the surplus of PV generated power and the red areas display the amount of consumption that was not covered with PV power.

You have a choice between the **Graph** and **Table** display mode.

Definition of the different colored areas within the balance graphs:

(see figure: Daily Balance Graph)

- Yellow areas - Production
- Red areas - Consumption (Total = not covered by production (red in the graph) + covered by production (green in the graph)).
- Green area - self-consumption (covered by production - green in the graph) with a percentage (in relation to production).



## 2.7.2 Month balance

The **Month** tab under balances displays the production and consumption side-by-side in a bar graph.

- Move the mouse above one of the bars to view either the daily yield or consumption.
- Click on one of the bars to go to the corresponding day view.

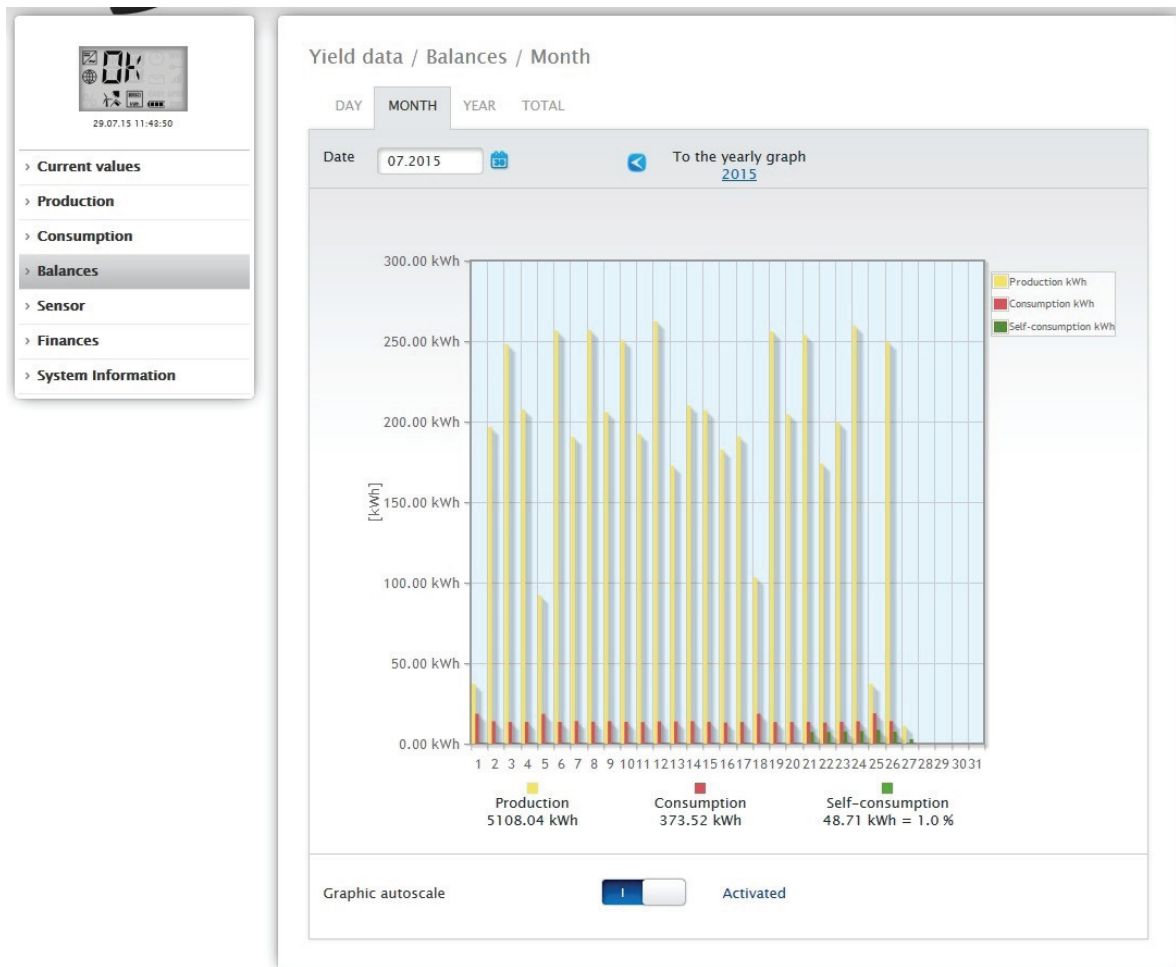


Fig.: Month view balance graph

### 2.7.3 Year balance

The Year tab under Balances displays the production and consumption side-by-side in a bar graph.

- Move the mouse above one of the bars to view either the monthly yield or consumption with a comparison of the current and target values in regard to the annual forecast.
- Click on one of the bars to go to the corresponding month overview.

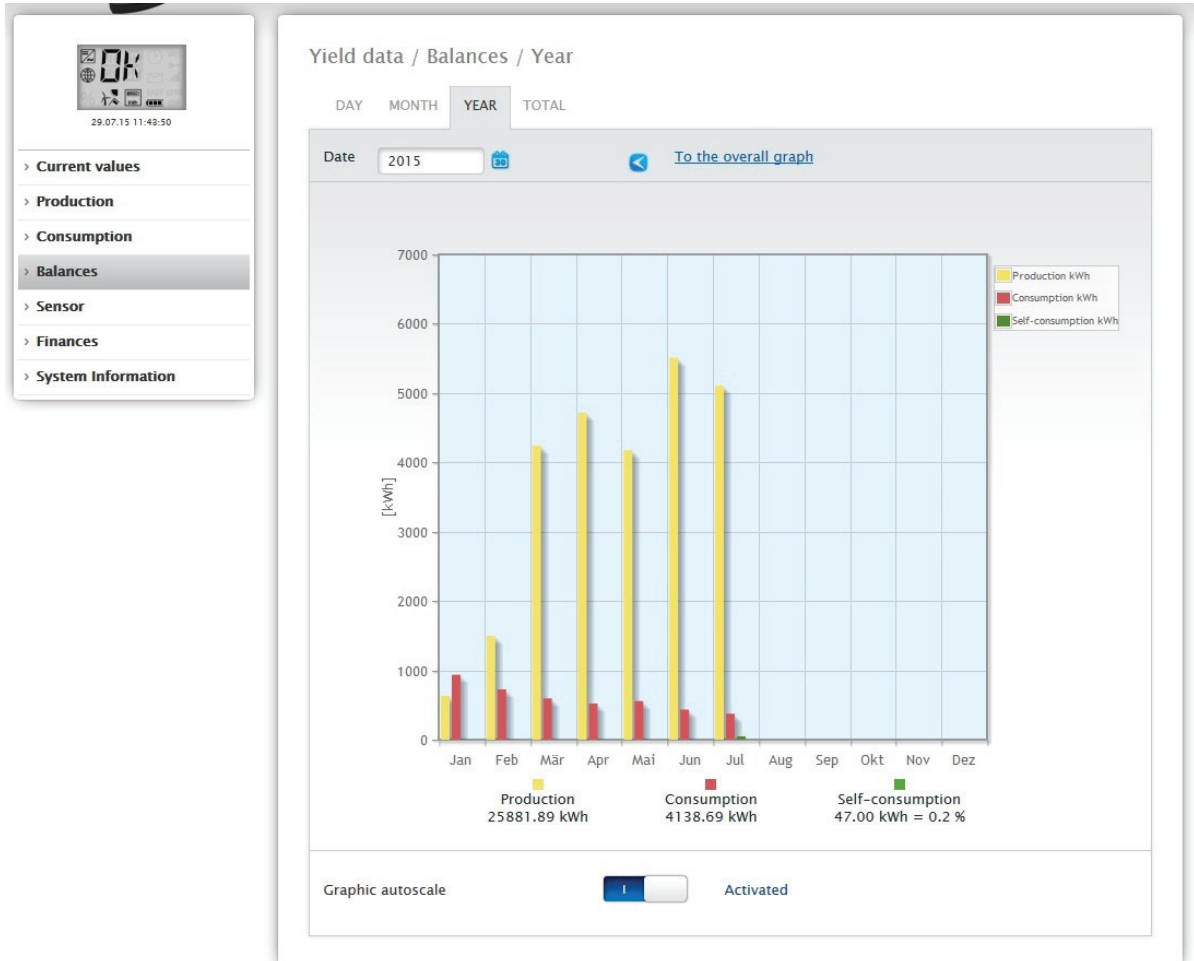


Fig.: Year view balance graph

## 2.7.4 Total balance

The **Total** tab under Balances displays the production and consumption side-by-side in a bar graph.

- Move the mouse above one of the bars to view either the annual yield or consumption with a comparison of the current and target values in regard to the annual forecast.
- Click on one of the bars to go to the corresponding annual overview.

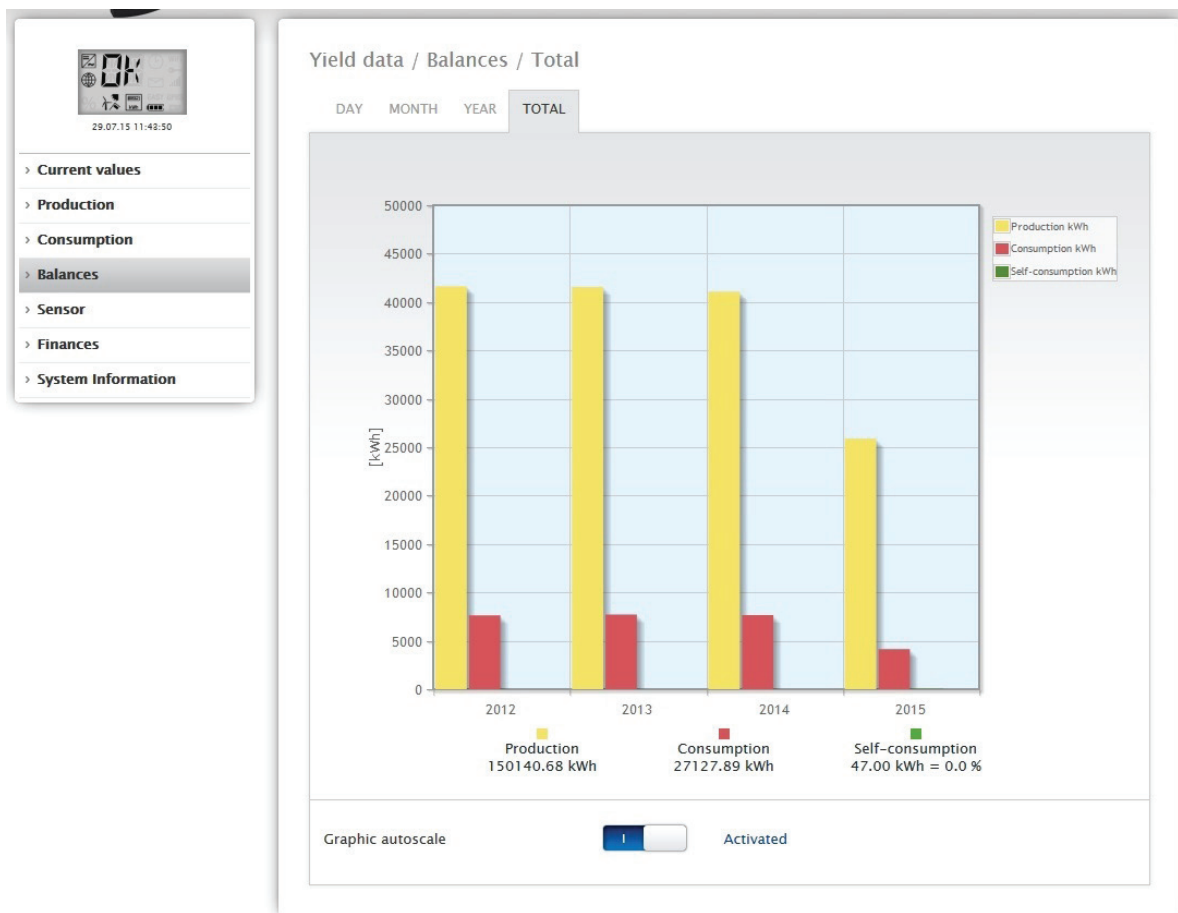


Fig.: Total balance graph

## 2.8 Finances

Your plant's financial performance can be displayed as a graph or table from the **Finances** menu. (See the chapter Defining Tariffs and Costs in Installation Manual for the configuration of the tariff and consumption values)

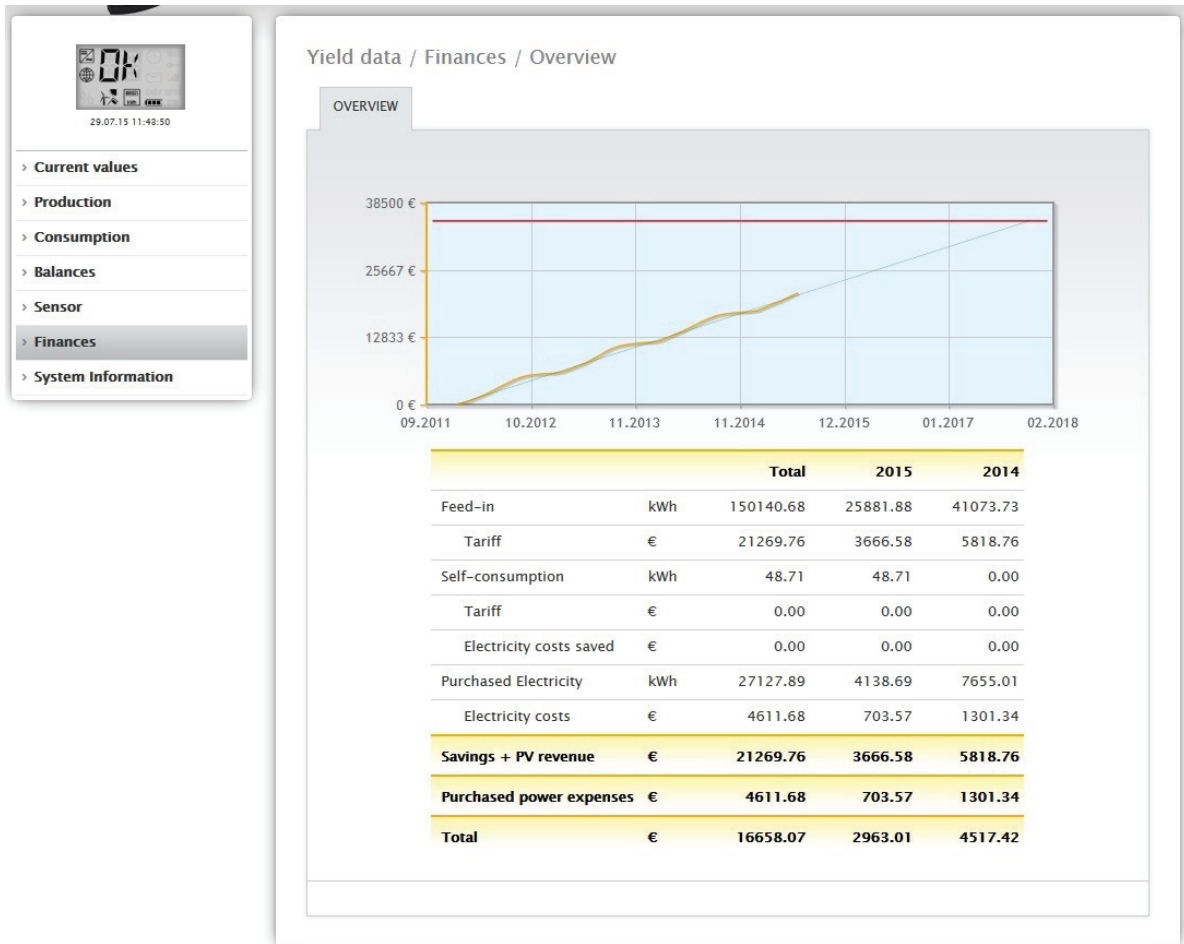


Fig.: Finances overview

The total financial performance of your plant is displayed as a graphic with the actual/target value curve in the overview.

The following values (split up in total and the last two years) are contained in the table.

- **Feed-in:**

This displays the amount of generated power in kWh that has been fed into the public grid.

- **Tariff:**

The tariff calculates the financial compensation for the feed-in amounts based on the rate and currency defined in the Configuration | Plant | Tariff settings.

- **Self-consumption:**

This displays the amount of generated power in kWh that has been consumed locally.

- **Tariff:**

Based on the rate in the settings for the tariff under Feed-in, this displays the financial compensation for the self-consumption refund (when such a compensation is allowed).

- **Electricity costs saved:**

Under electricity costs saved, the total amount saved based on all of the available data such as that from self-consumption (power not obtained from the grid) and from a battery storage system is displayed.

- **Power consumption:**

This displays the amount of power consumed that was obtained from the grid.

- Electricity costs:

The calculations are based on the rate defined in the Configuration | Plant | Electricity Costs settings.

- Savings + PV revenue:

This includes all of the revenue generated by the PV plant from the feed-in tariff and self-consumption. In addition to self-consumption, the amount of electricity saved by not obtaining it from the grid, such as from a battery system, is included.

- Purchased power expenses:

This displays the total expenses for the power obtained from the grid.

- Total:

This is the total after the purchased power expenses have been subtracted from the PV revenue.

Note!



The overview curve is only visible in the [Yield Data | Finances](#) section after several weeks of data recording.

## 2.9 Sensor

A graphic evaluation from the connected sensors can be displayed from the **Sensor** menu.



Fig.: Graph of Sensor Box values

The following values can be displayed individually:

- Irradiation W/m
- Module temperature C°
- Ambient temperature C°
- Wind speed m/s

Different values with different units are displayed in the graph. The units used and their colors are displayed in the key at the top.

Here you also have the option to show or hide individual values with a mouse click. You can select and subsequently evaluate certain days with the Date box.

### Note!



Data is only available if a sensor is connected.

## 2.10 System Information

Go to the **System Information** menu for plant and system information.

The screenshot shows the Solar-Log web interface. On the left is a navigation menu with the following items: Current values, Production, Consumption, Balances, Sensor, Finances, and System Information (which is highlighted). The main content area is titled 'Yield data / System Information' and contains the following data:

About this Solar-Log™	
Model	Solar-Log 2000 PM+/GPRS
Serial number	[REDACTED]
Firmware version	3.4.0 Build 76 - 23.06.2015
Plant data	
Plant size	44100 Wp
Detected devices	
Inverters	RS485-A: 3 x Diehl AKO
Power meters	RS485-A: 4 x Janitza
Sensors	RS485/422-B: 1 x M&T Sensor
Battery	
Smart Consumer	
Data transfers	
Portal transfer	29.07.15 13:45:11 - OK
Export (FTP)	29.07.15 13:45:11 - OK
E-mail	29.07.15 11:25:49 - OK

Fig.: System Information

The following information is displayed:

About this Solar-Log™:

- Model
- Serial number
- Firmware version

Plant data:

- Plant size
- Installation date

Detected devices:

- Inverters
- Power meters
- Sensors

Data transfers:

- Portal transfer (activated/deactivated)
- Export (FTP): Last transfer with the time and date and state message (in the example: OK)
- E-Mail: Last transfer with the time and date and state message (in the example: OK)

## 2.11 Accessing Diagnostic values

Access the Diagnostic from the header bar.

The following options can be selected from the [left-side navigation](#) menu.

- Inverter Diagnosis
- Event log
- Notifications
- Feed-In Management
- SCB Monitor (only Solar-Log 2000 with SCB activated)
- Alarm contact (only Solar-Log 2000)
- CSV Export

### 2.11.1 Inverter Diagnosis

To access the Inverter diagnostic menu, go to [Diagnostic | Inverter Diagnostic](#).

The following tabs can be selected from this menu:

- Inverter details
- Tracker comparison
- Module field comparison

Different values with different units are displayed in the following diagnostic graph. A key is displayed for every graphic to define which units are used and their colors.



## Inverter details

To access the Inverter details menu, go to [Diagnostic | Inverter Diagnostic | Inverter details](#).

A particular date and device (e.g. inverter or sensor) can be selected under inverter details and evaluated.



Fig.: Inverter details graph

In the example (see Fig.: Inverter details graph), the following values can be displayed for the inverter:

- Pac
- DC power 1
- DC power 2
- DC power 3
- Yield
- DC voltage 1
- DC voltage 2
- DC voltage 3
- AC voltage (Uac) – this value is displayed if the inverter supports this function).
- Temperature – this value is displayed if the inverter supports this function. Otherwise only the value 1/0 C° is displayed in the graph.)

All of the displayed values can be directly selected and deselected at any time by clicking in the graph key (upper-right corner of the graph),

## Tracker comparison

To access the Tracker comparison menu, go to **Diagnostic | Inverter Diagnostic | Tracker comparison**. Two trackers (either from the same device or two different devices) can be compared on a particular date by selecting the date, device and tracker.

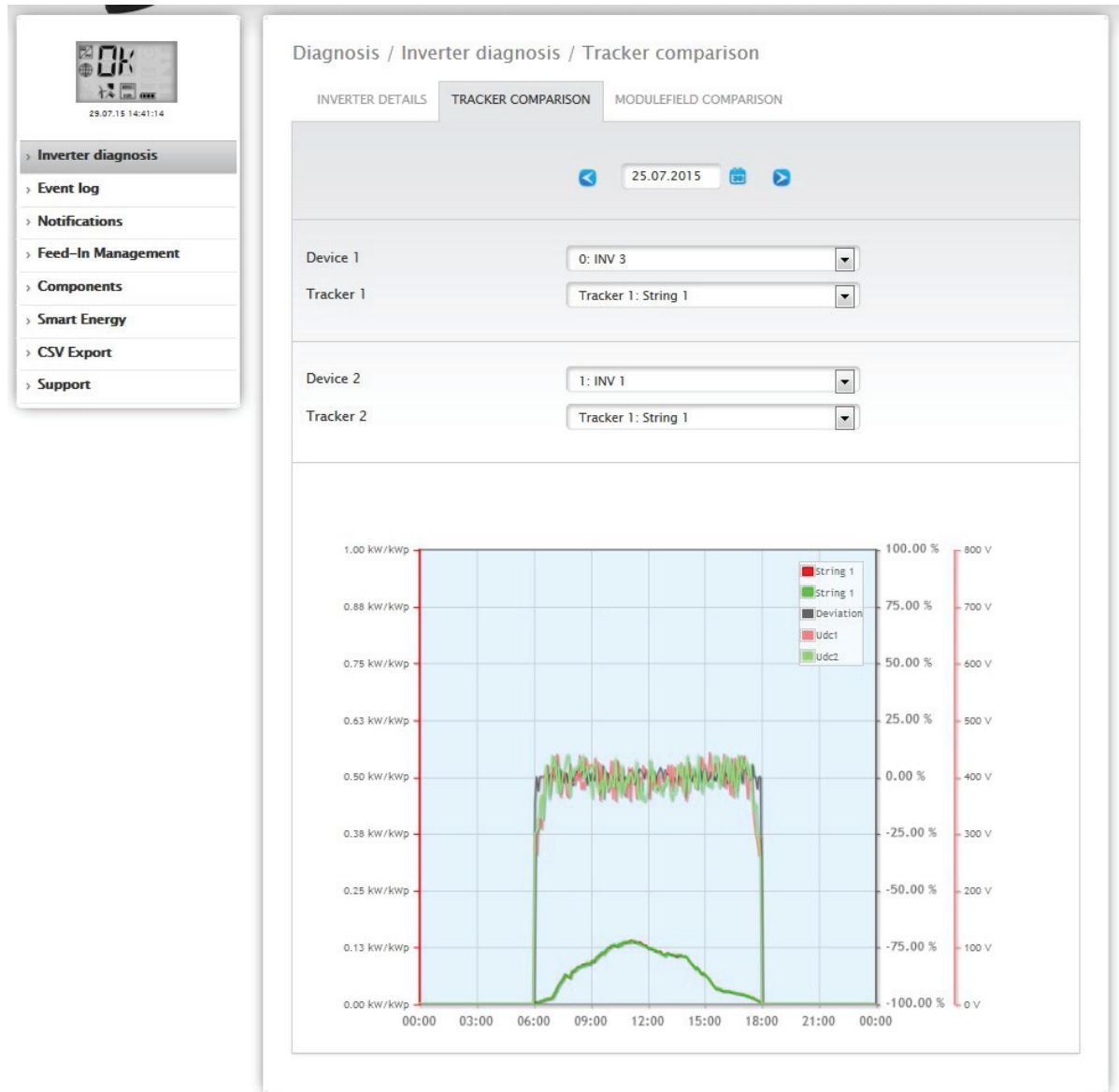


Fig.: Tracker comparison graph

In the example (see Fig.: Tracker comparison graph), two different inverters have been selected and evaluated. The better view has been selected for the DC voltage 1 and 2 values. The two strings from inverter 6 and 7 are directly compared to each other. The gray line displays the degree of deviation. The deviation is indicated as a percentage in the right column, and displayed as a positive or negative percentage. In the example, the deviation between the strings is from about -5% to +5%. The column on the left indicates the kW/kWp output of the tracker. All of the displayed values can be directly selected and deselected at any time by clicking in the graph key (upper-right corner of the graph).

## Module field comparison

To access the Module field comparison menu, go to [Diagnostic | Inverter Diagnostic | Module field comparison](#).

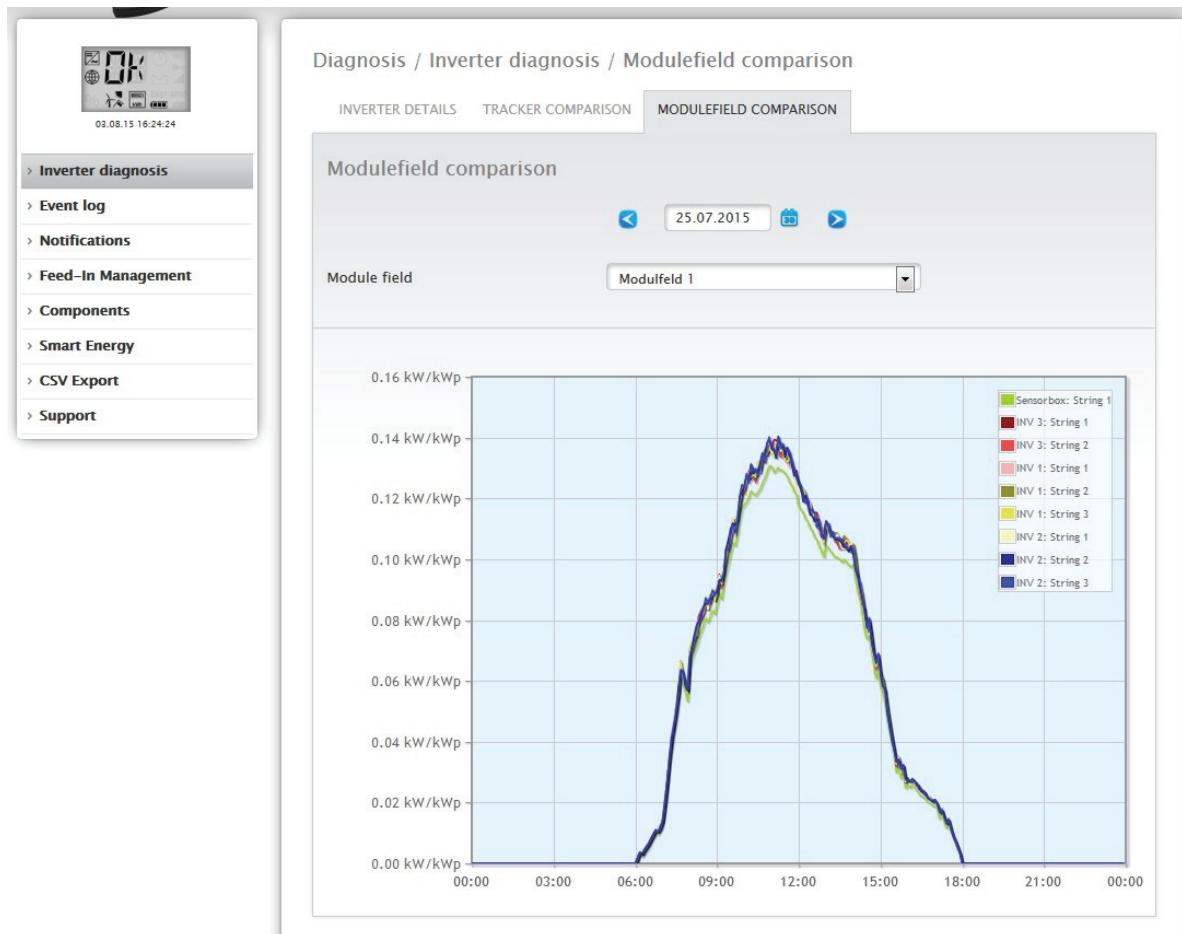


Fig.: Module field comparison graph

With the [date](#) and [Module Field](#) boxes, the module field comparison permits all devices (e.g. inverters and sensors) and their strings that are assigned to the same module field to be compared on the current and previous days (see Fig.: Module field comparison graph) in order to more efficiently detect faults from the performance monitoring.

In the example graph, the following values are displayed:

- Sensor Box
- INV 1
- INV 2
- INV 3

All of the displayed values can be directly selected and deselected at any time by clicking in the graph key (upper-right corner of the graph).

## 2.12 Battery Diagnostic

To access the Battery diagnostic menu, go to [Diagnostic | Battery Diagnostic](#).

The following tabs can be selected from this menu:

- Current Measurement Values
- Charging History 1-Day
- Charging History 7-Days
- Balances

### Current Measurement Values

The following values are available from the [Current Measurement Values](#) tab:

- Battery voltage  
The current voltage of the battery.
- Charge Level (%)  
The current charge status of the battery as percentage.  
(The charge level for power meters in battery meter mode is currently not set.)
- Current charging power [W]  
The battery's current amount of charge in watts.
- Current discharging power [W]  
The battery's current discharge amount in watts.

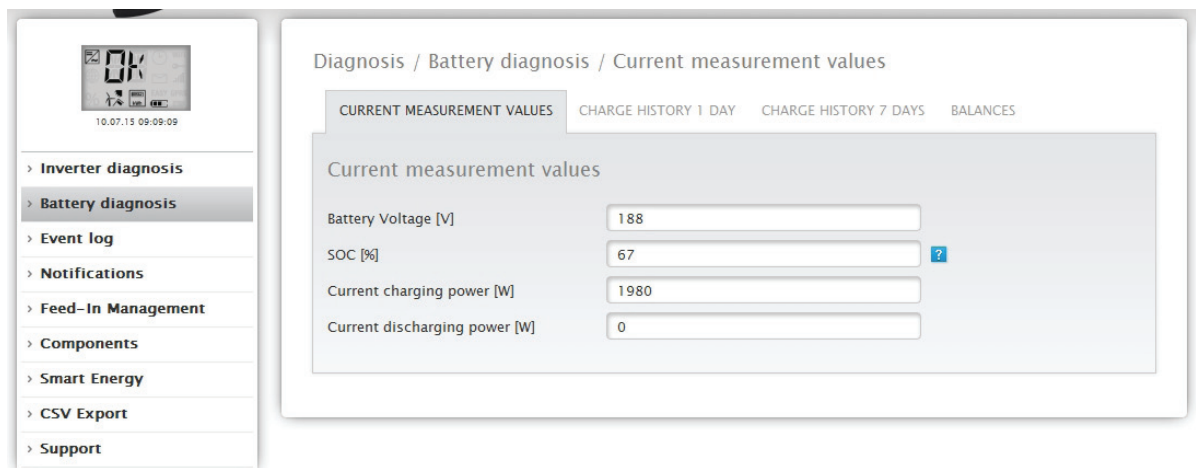


Fig.: Battery diagnosis - Current measurement values

## Charging History 1-Day

A daily graph with the following values is in the [Charging History 1-Day](#) tab.

- Charge  
The battery's charge levels throughout the day in watts.
- Discharge  
The battery's discharge levels throughout the day in watts.
- Charge Level (%)  
The battery's charge levels throughout the day as a percentage.
- U (V)  
The battery's voltage curve throughout the day in volts.

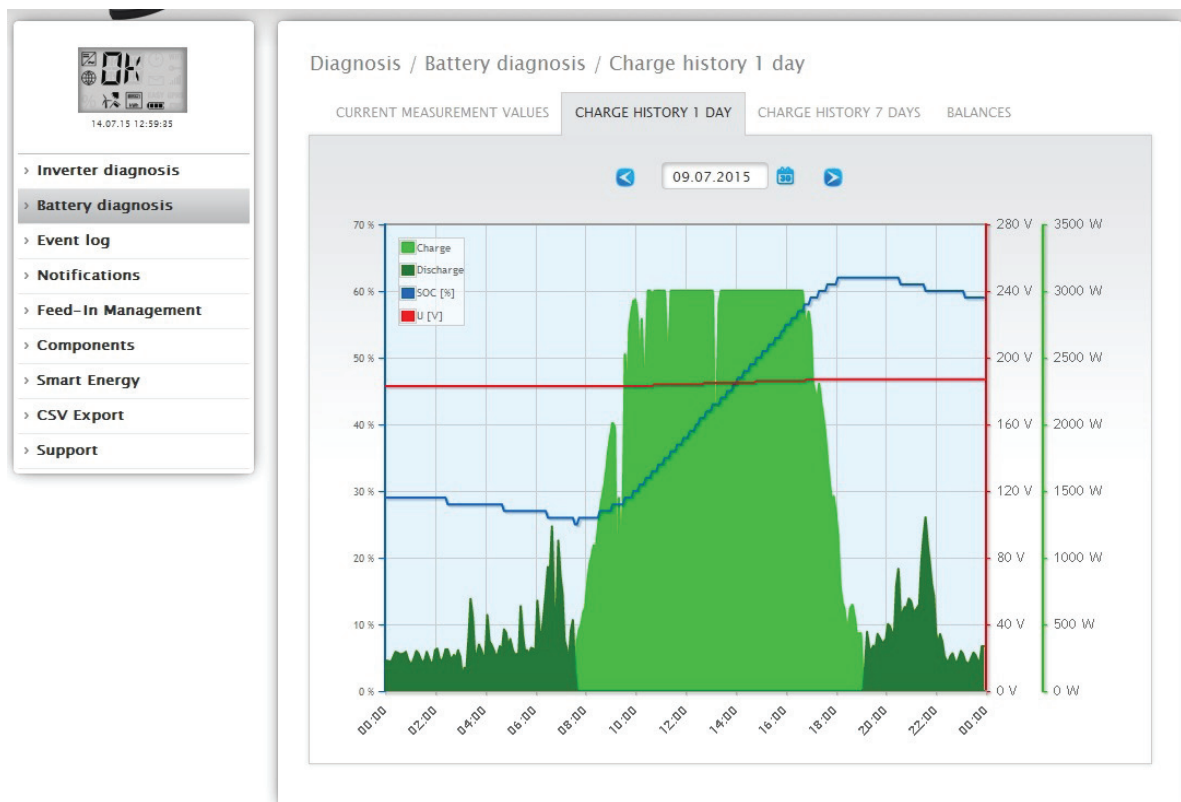


Fig.: Battery diagnosis - Charging History 1-Day

The [Date](#) box offers the option to select a particular day for viewing. The arrow keys can also be used to move to the next or previous date.

The individual values, at the top-left of the graph key, can be displayed or hidden with a mouse click.

## Charging History 7-Days

A graph containing the last seven days with the following values is in the [Charging History 7-Days](#) tab.

- Charge  
The battery's charge levels from the last 7 days in watts.
- Discharge  
The battery's discharge levels from the last 7 days in watts.
- Charge Level (%)  
The battery's charge levels from the last 7 days as a percentage.
- U (V)  
The battery's voltage curve over the last 7 days.

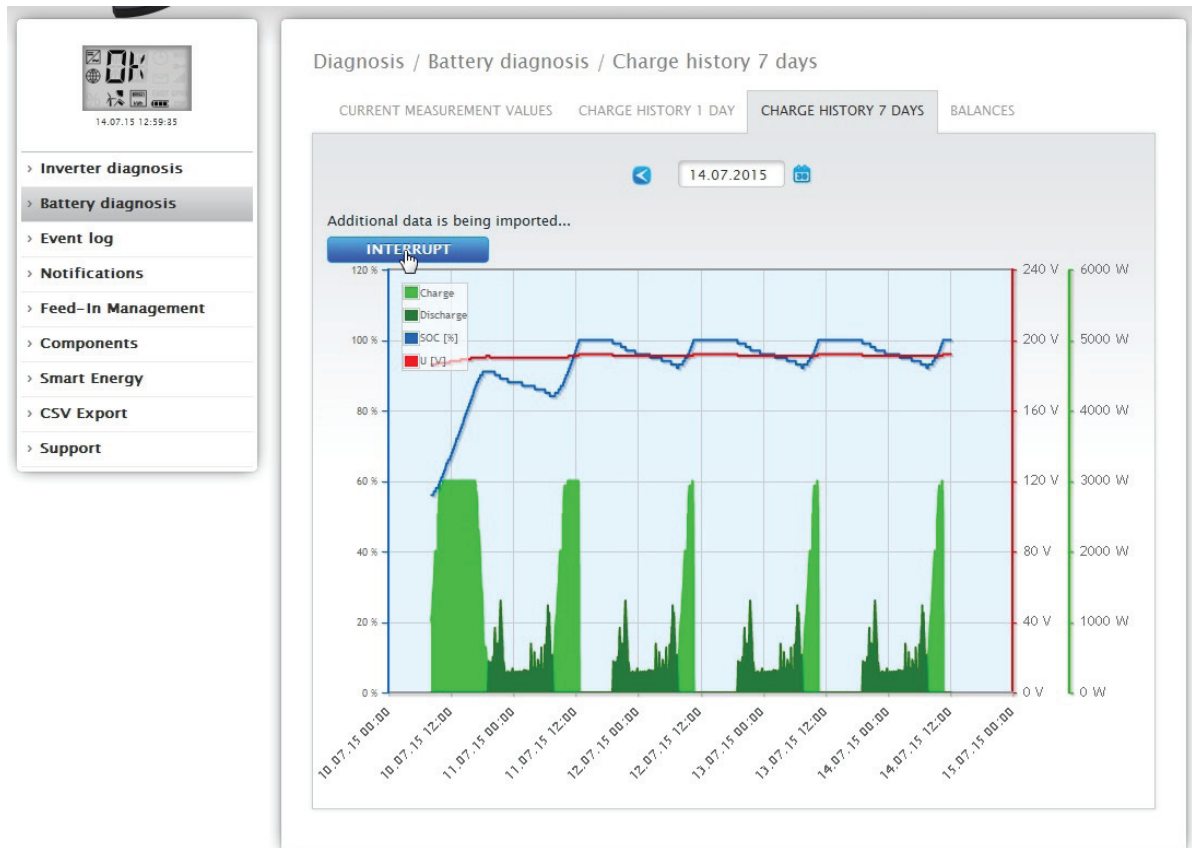


Fig.: Battery diagnosis - charging history 7 days

The **Date** box offers the option to select a particular 7-day period for viewing. The arrow keys can also be used to move to the next or previous date.

The individual values, at the top-left of the graph key, can be displayed or hidden with a mouse click.

If needed, click on the **interrupt** button to stop loading the data.

## Charge Level of the Battery via the LCD Display

The charge level of the battery is displayed via the charge history in the Web interface and via the LCD display. The following charge levels of the battery are indicated with the battery symbol elements. (see the following illustration)

- Charge level < 25%: Battery drained
- Charge level < 50%: 1 Element
- Charge level < 75% 2 Elements
- Charge level  $\geq$  75: 3 Elements
- The drained battery symbol blinks when the battery is offline.

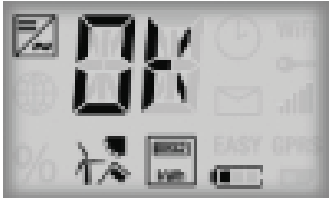


Fig.: LCD Display with the battery symbol and one element

Also refer to the chapter "[Current Values](#)"

## Balances

The following sections are in the [Balances](#) tab:

- Electricity savings from battery usage
- Battery efficiency

### Electricity savings from battery usage

The following columns are in this section:

- Discharge  
The battery's discharge during its entire run-time in kWh.
- Electricity costs saved  
The electricity savings from battery usage during its entire run-time in the defined currency.

## Battery efficiency

The following columns are in this section:

- Charge  
The battery's charge during its entire run-time in kWh.
- Discharge  
The battery's discharge during its entire run-time in kWh.
- Efficiency values  
The battery's efficiency values during its entire run-time as a percentage.

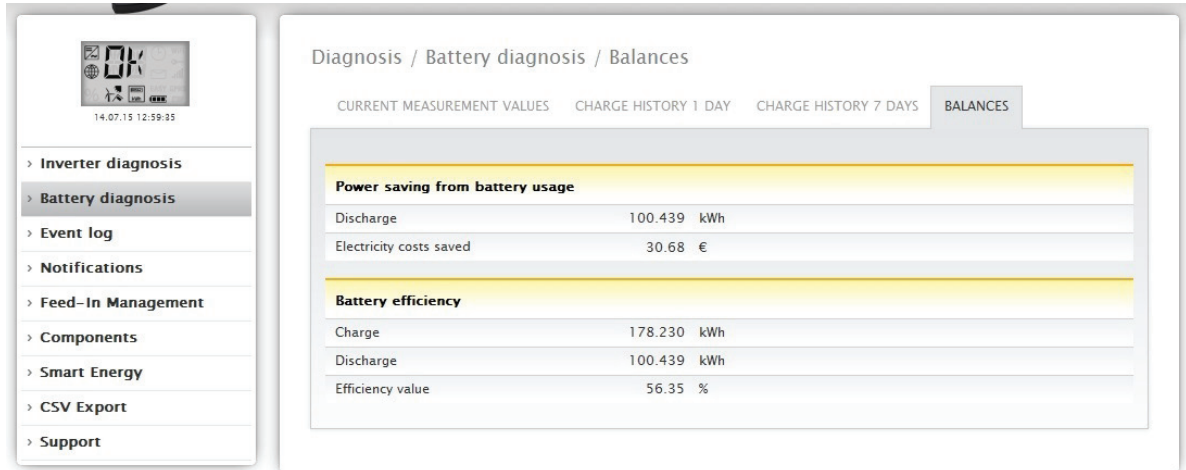


Fig.: Battery diagnosis - Balance



## 2.12.1 Accessing Event logs

To access the Event logs menu, go to **Diagnostic | Event logs**.

The following mode is loaded when accessing the event logs.

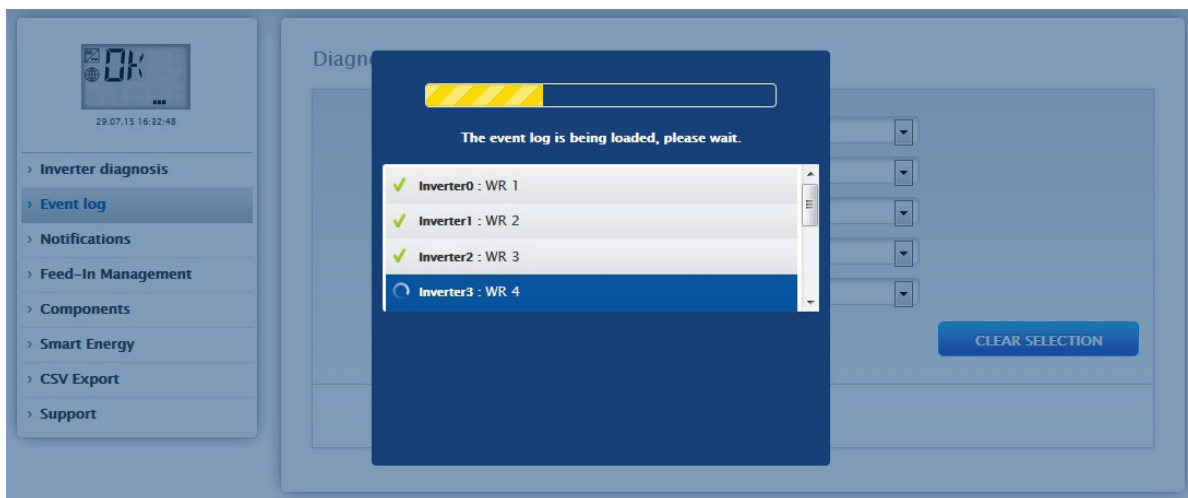


Fig.: The event log is being loaded.

After the event log has been loaded, the window switches back to the normal view.

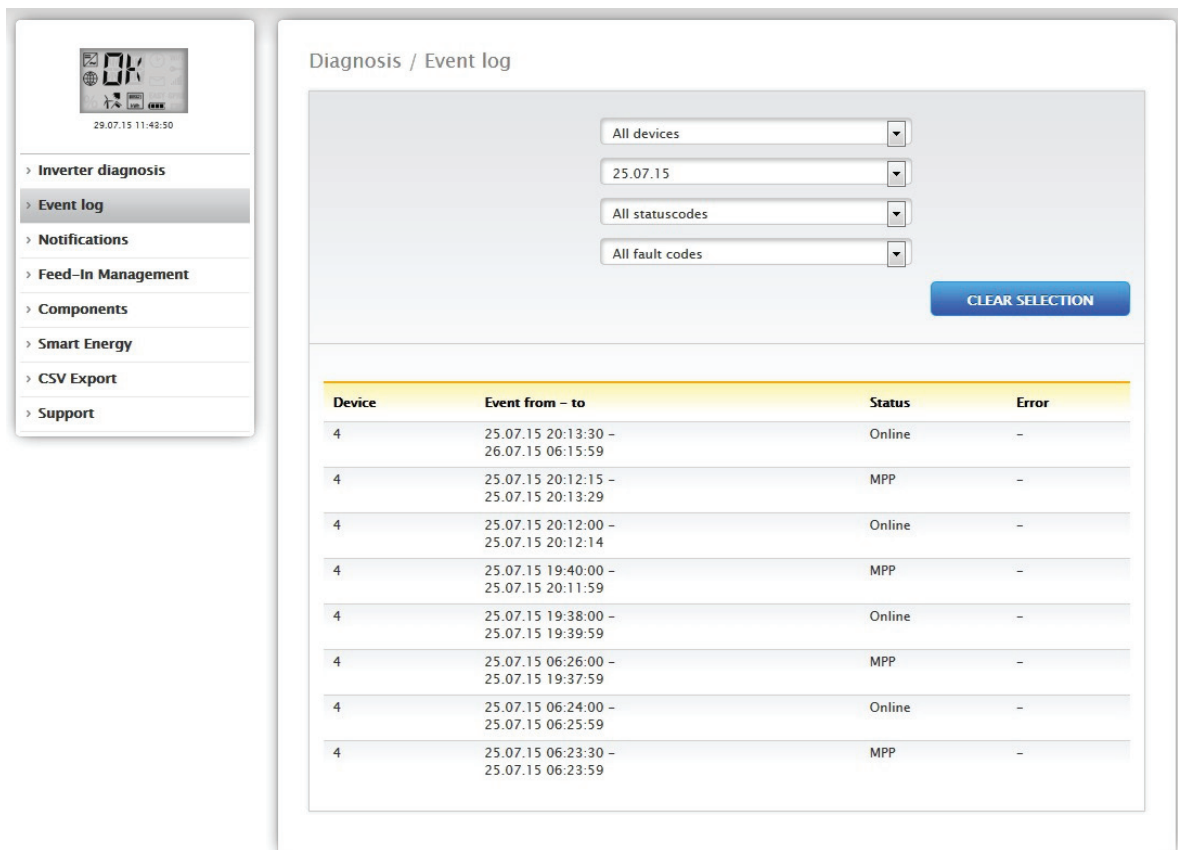


Fig.: Event log

The following settings are available from the four drop-down menus in this view:

- Devices:

Under devices, you can select individual devices or leave the default selection as is (default "All devices").

- Days:

Under days, you can select individual days or leave the default selection as is (default "All days").

- Status codes:

Under status codes, you can select individual status codes or leave the default selection as is (default "All status codes").

- Fault codes:

Under fault codes, you can select individual fault codes or leave the default selection as is (default "All fault codes").

By default, the current day is displayed in the table with all devices, fault codes and status codes.

## 2.12.2 Accessing Notifications

To access the Notifications menu, go to [Diagnostic | Notifications](#).

The screenshot shows the 'Diagnosis / Notifications' page. On the left is a navigation menu with options: Inverter diagnosis, Event log, Notifications (highlighted), Feed-In Management, Components, Smart Energy, CSV Export, and Support. The main area displays a table of notifications.

Message date	Send date	Send Tries	Message type	Recipient	Text
29.07.15 12:25:11	pending	0	Offline	0	
29.07.15 12:25:11	pending	0	Offline	0	
29.07.15 12:25:10	pending	0	Offline	0	
29.07.15 12:25:10	pending	0	Offline	0	
29.07.15 12:25:10	pending	0	Offline	0	
29.07.15 11:55:11	pending	0	Offline	0	
29.07.15 11:55:11	pending	0	Offline	0	
29.07.15 11:55:11	pending	0	Offline	0	
29.07.15 11:55:10	pending	0	Offline	0	

Fig.: Notification overview

The notification overview is displayed as a table.

A maximum of 50 messages are displayed in this table. The following columns are displayed:

- Message date:

Displays when a fault is detected and reported.

- Send date:

A date is displayed in this column if the message has been successfully sent. Pending is displayed in this column if there are more send attempts remaining, or aborted after 5 unsuccessful attempts to send the message.

- Send Tries:

The number attempts needed to successfully send the message or the number of unsuccessful attempts is displayed in this column. Aborted occurs after 5 unsuccessful attempts to send the message. The number 1 to 5 can be displayed in this column if there are still more send tries remaining.

- Message type:

This column displays the type message (for example, **Offline**, if an inverter is offline).

- Recipient:

This column displays the method with which the message was sent.

- Text:

There is the option to display the messages sent by the Solar-Log™ under Text.



Note!

For sending notifications, see the chapter "Configuring Notifications" in the Installation Manual.

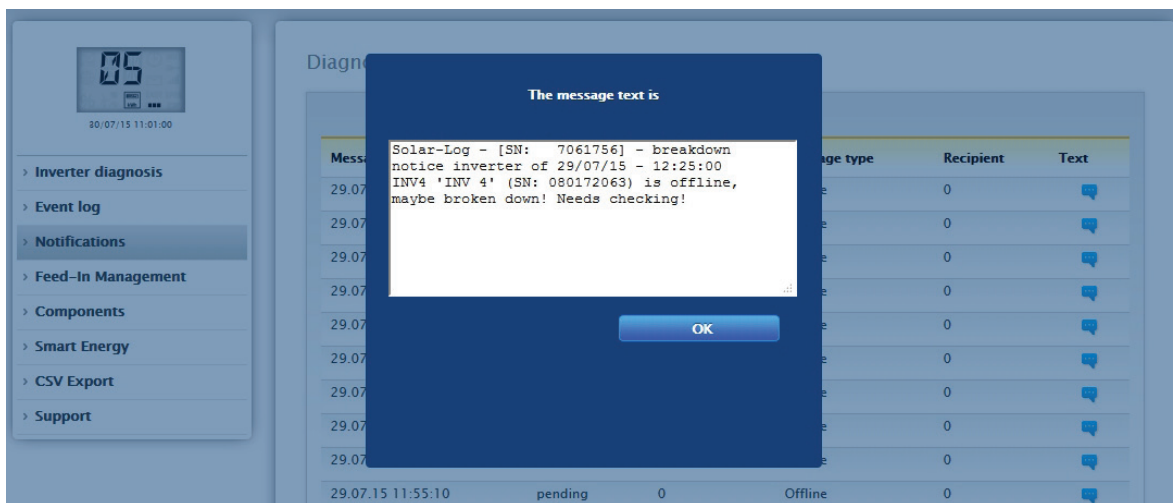


Fig.: Message with text field

### 2.12.3 Accessing Feed-In Management

To access the Feed-In Management menu, go to [Diagnostic | Feed-In Management](#).

**Note!**



The menu [Feed-In Management](#) under [Diagnostic | Feed-In Management](#) only appears if active power has been configured in the [Configuration | Feed-In Management](#) section.

Diagnosis / Feed-In Management / Control state

CONTROL STATE | FEED-IN BALANCE | UTILITY METER | PM-HISTORY

Control state

Power reduction

Reduction type determined by:   
 Reduction type:   
 Value determined by:   
 Target power output (%DC):

	RS485/422-C	Total
Generator power (kW)	285.00	285.00
Maximum AC power (kW)	220.00	220.00
Allowed power (kW)	285.00	285.00
Consumption (kW)	114.17	114.17
Control value AC power (kW)	220.00	---
Current power output (kW)	147.01	147.01
Control value power (% AC)	100.00	---
Current power output (% AC)	66.82	66.82
Feed-in power (% DC)	11.52	11.52

Reactive power control

Reactive power determined by:   
 Recte control type:   
 Value determined by:   
 Secondary type of reactive power control:   
 Secondary value determined by:   
 Cos(Phi):   
 Reactive power (VAR):

Fig.: Feed-In Management - Control State

The inverter control can be analyzed and adjusted in the [Diagnostic | Feed-In Management](#) settings section.

There is also a **10% Diagnosis Function** to simulate a dynamic reduction to 10%.  
The values are displayed in the table.

**Note!**



The 10% Diagnosis Function can only be used when the 70% Fixed Reduction has been activated.

## Explanation of the Values in the Power Reduction Section

The following values are displayed in the Power Reduction section:

**Power reduction type determined by:**

The currently active control source is indicated in this field.

Displayed Text	Explanation Text
PMC_NONE	No control source.
PMC_DIAG	Controlled by the diagnostic mode.
PMC_MODBUS_2	Controlled by the ModBus PM V2 (new ModBusPM).
PMC_MODBUS_1	Controlled by the ModBus PM V1 (old ModBusPM).
PMC_PROFILE	Controlled by the PM Profile.
PMC_INTERN	Controlled by the internal configuration.
PMC_DM_MODBUS	Controlled by direct seller via ModBusDM.
PMC_DM_RCR	Controlled by direct seller via ripple control receiver

**Type of Reduction:**

This contains the current type of power reduction that is specified by the control source.

Displayed Text	Explanation Text
PMF_NONE	No power reduction function.
PMF_PR_ERROR	An error occurred while determining the power reduction function.
PMF_PR_FIX_PERC	Fixed reduction at % DC.
PMF_PR_FIX_KW	Fixed reduction at X kW (AC)
PMF_PR_VAR_PERC	Fixed reduction at % DC with self-consumption calculation.
PMF_PR_VAR_KW	Fixed reduction at X kW (AC) with self-consumption calculation.
PMF_PR_FIX_MATRIX	Reduction based on the value from the matrix (ripple control receiver configuration).
PMF_PR_VAR_MATRIX	Reduction based on the value from the matrix (ripple control receiver configuration) with self-consumption calculation.

**Value specification from:**

This field indicates how the control value used was determined.

Displayed Text	Explanation Text
PMV_NONE	No control source.
PMV_CONFIG	The value is stored in the configuration.
PMV_MODE	The value can be determined by the reduction mode.
PMV_PR_PIGGY	The value comes from the PM (power reduction) input (and is determined in combination with the matrix in the configuration or PM profile).
PMV_MPR_PIGGY	The value comes from the PM (power reduction) input of the master (and is determined in combination with the matrix in the configuration or PM profile).
PMV_MODBUS_1	The value comes from the ModBus PM V1 interface.
PMV_MODBUS_2	The value comes from the ModBus PM V2 interface.
PMV_PROFILE_ADAM	The value comes from the analog or digital input of the IO Box (Adam Box).
PMV_PROFILE_INTERN	The value is specified in the PM profile.
PMV_ERROR	An error occurred while determining the value.
PMV_CONFIG_UTILITY	The value was determined via the internal configuration based on the Utility Meter measurement.
PMV_MODBUS_DM	The value comes from the ModBus DM interface (direct seller interface).

**Target power output %:**

The fields indicate the percentage of the Plant's DC power determined by the control for the target output.

The detailed values for the individual bus connections and for the total plant are displayed in the following table below. The individual buses (RS485 A-C) are displayed depending on which bus is assigned to control the inverters.

The column **Total** always corresponds to the plant total and reflects the value from the grid connection point. The consumption values are displayed in all of the columns, but only the plant total is taken into account.

**Note!**



The values from the individual inverters are calculated per bus and for the entire plant.

**Generator power (kW):**

The generator power corresponds to the module output of the inverter that is connected to this data bus. This value results from the total of the partial outputs entered in the field generator power under configuration | Devices | Configuration. This kW value is used when calculating the output reduction (e.g.: the 70% reduction).

**Maximum AC power (kW):**

The maximum AC power of the inverter(s) depends on the device. Refer to the inverter specifications for this value and configure it in the field Maximum AC power under configuration | Devices | Configuration.

**Allowed power (kW):**

This kW value is the maximum amount of power that is allowed at the grid connection point. The value is calculated based on the generator output and the current power output.

**Consumption (kW):**

This value is calculated from the consumption meters and refers to the entire plant. The values displayed in the respective bus column only refer to the plant total and are not taken into account in the corresponding columns. The consumption value is normally subtracted from the allowed power from the entire plant.

**Control value power (kW):**

This value is calculated by the Solar-Log™ and is the maximum current power output from the inverters. It is used for the current target power output.

**Note!**

Due to technical reasons, the calculation from the Solar-Log™ is subject to a rounding factor. This may lead to deviations in the data recording.

**Current power output (kW):**

The value refers to the current output generated by the inverter per interface (column) and for the entire plant.

**Control value power (% AC):**

The Solar-Log™ calculates the control value power (kW) as a percentage of the maximum AC power and relays this to the inverters.

**Current power output (AC%):**

The value indicates the total output generated as a percentage of the maximum AC power for the inverter or all of the inverters on a bus.

**Feed-in power (% DC):**

This value is the current amount of feed-in power as a percentage of the generated output.

## Explanation of the Symbols in the Feed-in power (% DC) column:



The feed-in power value is in the target power range with a tolerance of -2% to +1%.



The feed-in power value is below the target value allowed. Generally, this means that the output allowed at the grid connection point is not being achieved due to low irradiation or high self-consumption.



This means that the value is above the target value allowed.

If the red triangle is only displayed at a bus and entire plant has a green symbol, this means that only this bus is over the target value allowed. However, the plant totals do not go over the target value because of self-consumption.

## Explanation of the Values in the Reactive Power Reduction Section

The following values are displayed in the Reactive Power Reduction section:

### Reactive Power determined by:

The currently active control source is indicated in this field.

Displayed Text	Explanation Text
PMC_NONE	No control source.
PMC_DIAG	Controlled by the diagnostic mode.
PMC_MODBUS_2	Controlled by the ModBus PM V2 (new ModBusPM).
PMC_MODBUS_1	Controlled by the ModBus PM V1 (old ModBusPM).
PMC_PROFILE	Controlled by the PM Profile.
PMC_INTERN	Controlled by the internal configuration.
PMC_DM_MODBUS	Controlled by direct seller via ModBusDM.
PMC_DM_RCR	Controlled by direct seller via ripple control receiver



Type of Reactive Power Reduction:

This contains the type of reactive power reduction that is specified by the active control source.

Displayed Text	Explanation Text
PMF_RP_NONE	No reactive power control.
PMF_RP_ERROR	An error occurred while determining the reactive power control function.
PMF_RP_FIX_COS	Fixed Cos(Phi) specification.
PMF_RP_FIX_Q	Fixed reactive power specification.
PMF_RP_Q_U_LINE	Reactive power determined by the characteristic curve Q(V)
PMF_RP_P_PN_LINE	Cos(Phi) determined by the configured characteristic curve P/Pn
PMF_RP_ADJUSTABLE	The control function is determined by an input (e.g. via a ripple control receiver or IO Box/Profile).
PMF_RP_MATRIX	The Cos(Phi) specifications are determined by the the configured matrix.

Value specification from:

This field indications how the control value used was determined.

Displayed Text	Explanation Text
PMV_NONE	No control source.
PMV_CONFIG	The value is stored in the configuration.
PMV_MODE	The value can be determined by the reduction mode.
PMV_RP_PIGGY	The value comes from the PM (reactive power control) input (and is determined in combination with the matrix in the configuration or PM profile).
PMV_MRP_PIGGY	The value comes from the PM (reactive power control) input of the master (and is determined in combination with the matrix in the configuration or PM profile).
PMV_MODBUS_1	The value comes from the ModBus PM V1 interface.
PMV_MODBUS_2	The value comes from the ModBus PM V2 interface.
PMV_PROFILE_ADAM	The value comes from the analog or digital input of the IO Box (Adam Box).
PMV_PROFILE_INTERN	The value is specified in the PM profile.
PMV_ERROR	An error occurred while determining the value.
PMV_CONFIG_UTILITY	The value was determined via the internal configuration based the Utility Meter measurement.
PMV_MODBUS_DM	The value comes from the ModBus DM interface (direct seller interface).

### Secondary Type of Reactive Power Control:

If "PMF\_RP\_ADJUSTABLE" is entered as the "Type of Reactive Power Reduction," the variable assignment from the selected type of reactive power control is indicated in this field.

For example, a PM profile defines that the type of reactive power control is determined by the Adam Box. That means:

The profile is responsible for the control. It is set up in the profile that the control can be selected via the Adam Box.

The type of control selected is displayed under "Secondary Type of Reactive Power Control."

The possible values are identical to those for "Type of Reactive Power Control."

### Secondary value specification from:

When a secondary control is used, the source of the control value is indicated in this field. The possible values are identical to those for "Value specification from."

### Cos(Phi):

The value defined in the Configuration | Special Functions | Feed-In Management | Reactive Power Control is displayed in this field.

### Reactive power (Var):

The value defined in the Configuration | Special Functions | Feed-In Management | Reactive Power Control is displayed in this field.

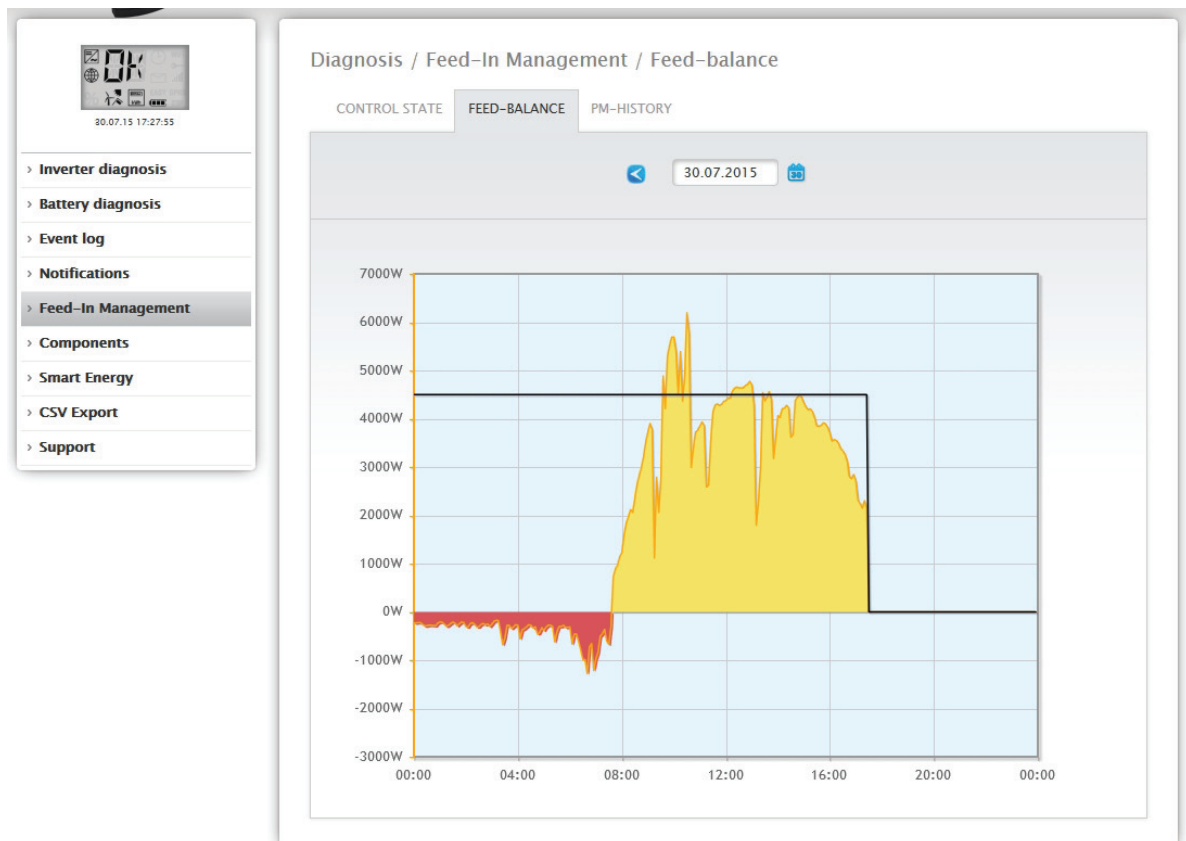


Fig.: Feed-In Management - Feed-balance

The **Feed-balance** tab displays when there was a grid feed and when electricity was purchased from the grid. Negative values mean that the power was purchased from the grid and positive values mean that power was fed into the grid.

Move the mouse cursor over the black line to display the following values for the power reductions:

- Time
- Percentage (%DC)
- Watt

## PM History

The power reductions are displayed in a table with three columns in the **PM History** tab.

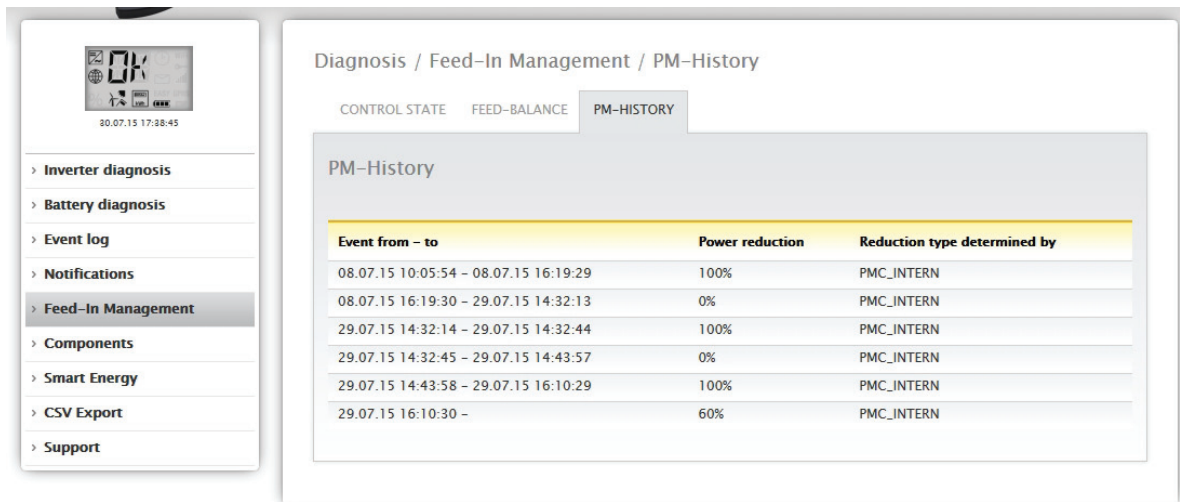


Fig.: PM History

- Event from - to:
  - The time and date that a power reduction was activated.
- Power reduction type determined by:
 

Possible values in this column:

  - PMC\_NONE
  - PMC\_DIAG
  - PMC\_MODBUS\_2
  - PMC\_MODBUS\_1
  - PMC\_PROFILE
  - PMC\_INTERN
  - PMC\_DIRECTM

(For an explanation, refer to the section: “Explanation of the Values in the Power Reduction “ in the table “Power reduction type determined by”).
- Power reduction:
  - The power reduction as a percentage.

Two additional tabs can be accessed in the Feed-In Management menu (as long as the devices are connected):

- Utility Meter
- I/O Box

There is a detailed guide for this in the Feed-In Management chapter of the Installation Manual.

## 2.12.4 Accessing the SCB Monitor (only Solar-Log 2000)

To access the SCB Monitor menu, go to **Diagnostic | Components | SCB Monitor**.

Diagnosis / Components / SCB monitor

SO METER ALARM CONTACT SCB MONITOR

SCB string overview

Device: 0: SCB

Measurement from 16.07.15 13:29:25

Analog no.	Type	Value
1	Current (string)	no data
2	Current (string)	no data
3	Current (string)	no data
4	Current (string)	no data
5	Current (string)	no data
6	Current (string)	no data
7	Current (string)	no data
8	Current (string)	no data
15	Voltage (total)	no data
16	internal temperature	no data

Digital no.	Type	Value
1	IN1	no data
2	IN2	no data

Fig.: SCB string overview

The **SCB String Overview** is displayed in a split-screen window. The connected devices (SCBs) can be individually accessed in the top screen via the pull-down menu. The bottom screen displays the current measurements of the individual strings based on the analog and digital number.

### Note!



The SCB Monitor menu only appears when a SCB is connected. It is also only available with the Solar-Log 2000.

## 2.12.5 Accessing components

To access the Components menu, go to [Diagnostic | Components](#).



Fig.: Components - SO meter on interface A and B

The following tabs are available in the [Components](#) menu:

- SO meter (see Fig.: Components - SO meter on interface A and B)
- Alarm contact (only with the Solar-Log™ 2000) (see Fig.: Alarm contact)
- Wireless Package (only when connected and the Wireless package visible has been activated) (See Fig.: Connection test - Wireless Package).

All of the SO meters connected to the Solar-Log™ are listed in the [Diagnostic | Components | SO-Meter](#) menu. The following values are displayed in the Pulse meter box:

- Total number of pulses for the SO meter since the last restart of the Solar-Log™ (first number)
- Number of pulses since the menu has been accessed (second number)
- Pulse number interval in a minute (third number)

**Note!**



The Solar-Log™ reorganizes the data every night so the total pulse counter of the SO meter is reset every night.

The [Diagnosis | Components | Alarm contact](#) menu is displayed in a split-screen window.

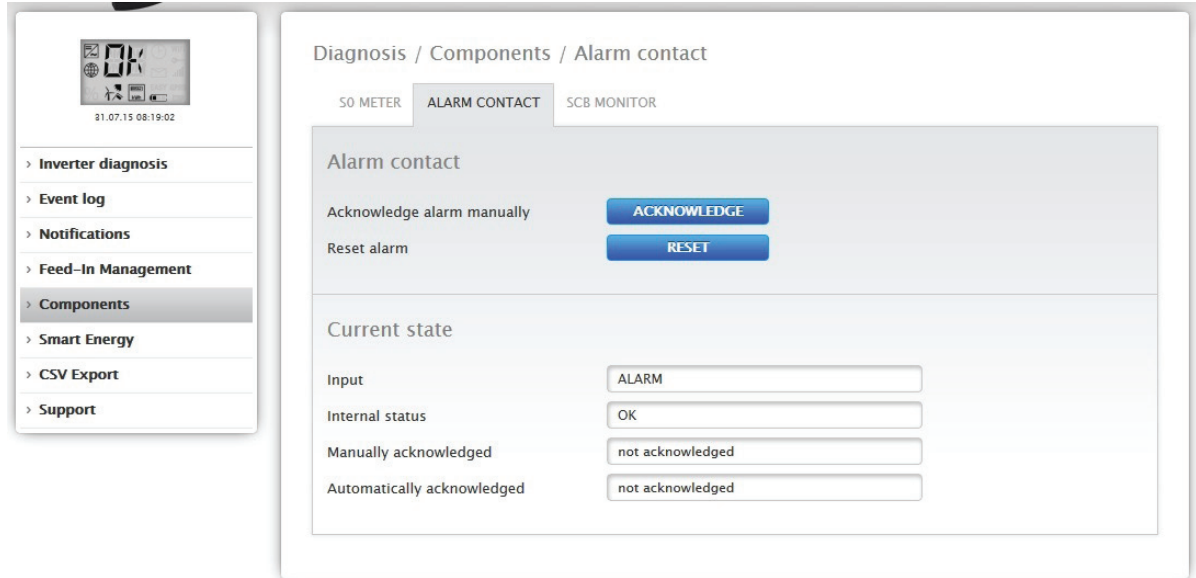


Fig.: Alarm contact

In the [Alarm contact](#) part at the top, you have the option to manually acknowledge the alarm or to reset it.

In the [Current Status](#) part at the bottom, you see the information in regard to the input of the notification (e.g. alarm), the Internet status (e.g. OK) and if the notification has been manually or automatically acknowledged.

**Note!**



The alarm contact is only available with the Solar-Log 2000.

You can access the Wireless Package test function from the [Diagnosis | Components | Wireless Package](#).

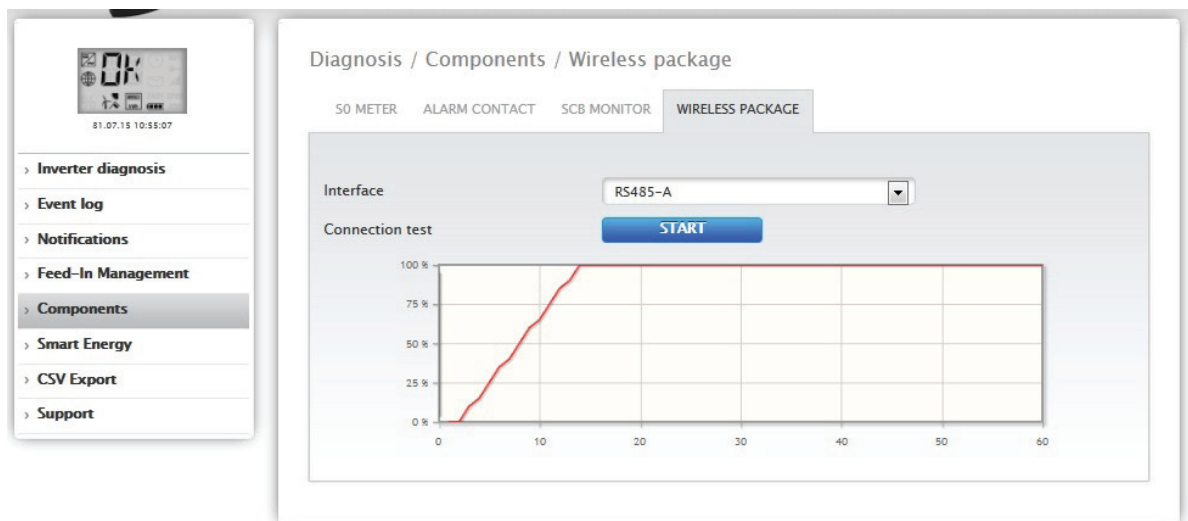


Fig.: Connection test - Wireless Package

To perform a connection test a Wireless Package has to be connected to the Solar-Log™, the interface with the Wireless Package has to be activated in the [Configuration | Devices | Definition](#) menu and the inverter has to be selected (refer to the RS485 Wireless Package Installation notes).

Select the interface that the Wireless Package is connected to and press the Start button for the connection test.

The test is successful when the line goes to 100% percent and remains there.

Note!



Successful data transfers can only be guaranteed when the wireless connection is permanently at 100%.

Note!



Refer to the Installation Manual for the installation and configuration of the Wireless Package.

## 2.12.6 Smart Energy

The following tabs are available from the Smart Energy menu:

- Profile Configuration
- Status (current)
- Smart appliances (displayed only when one is connected)

Currently, the following smart appliances are supported:

- EGO Smart Heater
- IDM

### Profile Configuration

From the Profile Configuration menu, one can check what has been defined under Configuration | Devices | Definition | Smart Energy and Configuration | Smart Energy | Control Logic. At the same time, the definition can be checked if it is correct.

- Table View
- Matrix View

Diagnosis / Smart Energy / Profile Configuration

PROFILE CONFIGURATION STATUS (CURRENT)

Display table view  Activated

Display matrix view  Activated

Table view

Control logic	Type	Switch
1	Surplus management	1 - Switch 1 ?
2	Surplus management	2 - Switch 2 ?
3	Surplus management	3 - Switch 3 ?
4	Surplus management	4 - Switch 4 ?

Matrix view

Control logic	1	2	3	4
Switch 1 - Switch 1 ?	✓			
Switch 2 - Switch 2 ?		✓		
Switch 3 - Switch 3 ?			✓	
Switch 4 - Switch 4 ?				✓

Fig.: Smart Energy Profile Configuration

The buttons "Display table view" and "Display matrix view" allow the diagnostic presentation formats to be separately displayed or hidden.



### Table View Section

The configured control logics are listed in this section. The profile position is displayed in the "Control logic" column. The configured logic type corresponding to the profile position is displayed in the "Type" column. The "Switch" column indicates which switch is linked to this profile. Move the mouse cursor over the symbols to display additional information or view detected errors.

### Matrix View

The individual switches of the control logic are listed in this section. In addition, the configuration can be checked if it is correct based on the green check.

### Definition of the Symbols\*



The check indicates which profile is linked to which switch.



A profile has not been assigned to the switch. The assignments can be defined from the [Configuration | Smart Energy | Control Logic](#) menu.



Error in the configuration. Information for the respective errors is in the mouseover text. Depending on the error, the profile and/or switch configuration has to be checked and corrected.



Provides additional information such as the defined type.

\* Information is displayed via the mouseover text.

### Status (current)

All of the data based on the profiles and appliances configured in the [Configuration | Devices | Definition | Smart Energy](#) is displayed in the Status (current) menu.

There are several sections with different values. The sections and values depend on which devices have been connected and which profiles have been configured.

Explanation of the sections based on the example plant with the following combinations:

- 2 inverters
- 1 consumption meter
- 1 EGO Smart Heater
- 2 active Smart Home profiles (Surplus + Heatrod 3-stage digital)

Additional plants and configurations can be derived and explained based on this example combination.

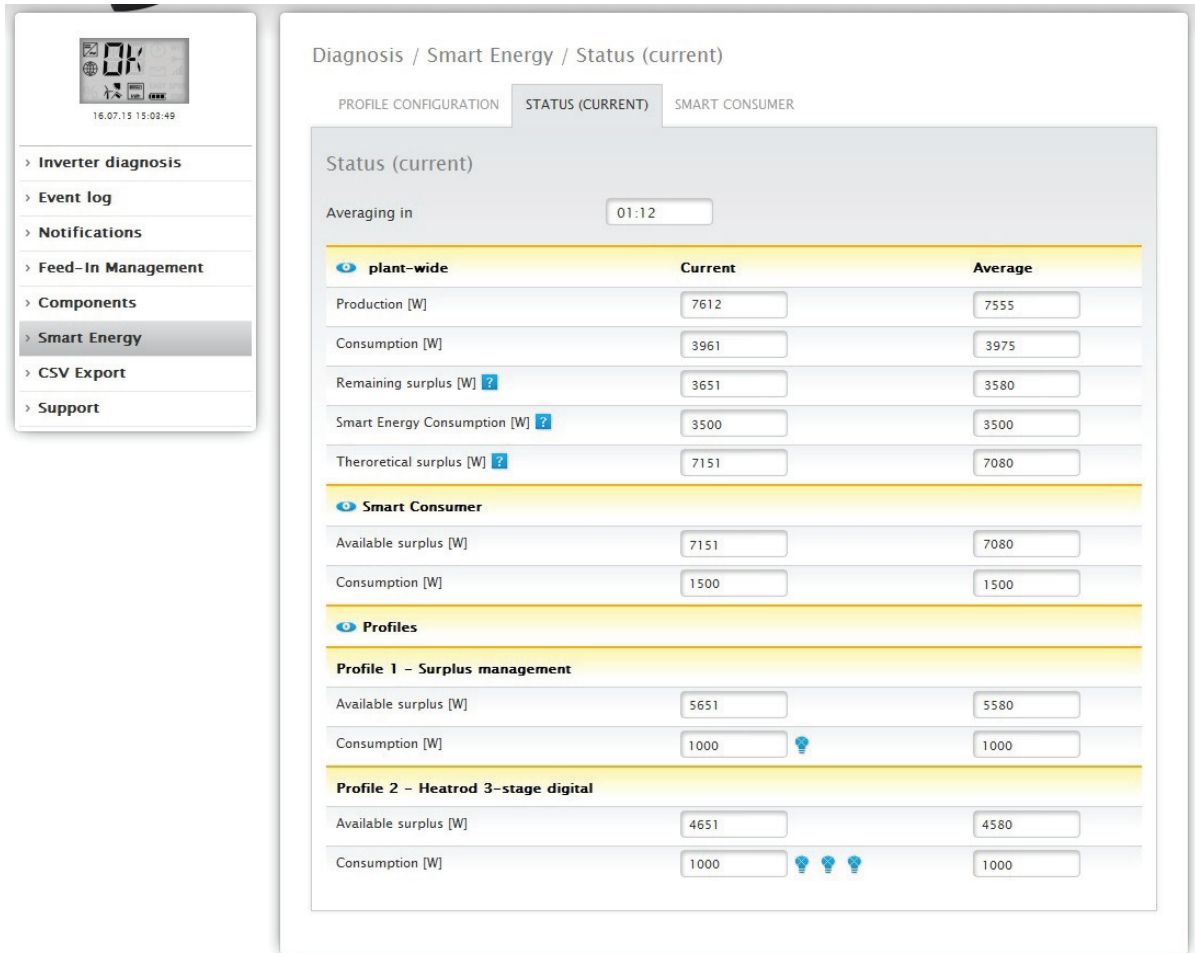


Fig.: Status (current) example plant with values

## Explanation of the Sections

### Averaging in

The countdown in the box "Averaging in" under Status (current) indicates when the next average will be calculated.

Internal processes, e.g. HTTP transmission or communication with the inverters, may cause a slight delay in the intervals. In such cases, the countdown remains at "0" until the interval has actually been exceeded.

### Current / 5-Min. averages

The columns **Current** and **5-Min. averages** display the current values and the 5-min averages. (5-min averages are used to filter out brief power peaks.)

## Plant-wide

### Production [W]

The production from the entire plant in watts.

### Consumption [W]

The entire consumption in watts.

### Remaining surplus [W]

Surplus that is still fed into the grid.

### Smart Energy Consumption [W]

This value is comprised of the nominal power of all of the currently active profiles and the current output from the controlled smart appliances.

### Theoretical surplus [W]

Theoretical surplus is the amount that would be fed into the grid if no Smart Energy logic was operating (including smart appliances).

**This is based on the following calculation:** Surplus (Remaining surplus) + the nominal power of all of the currently active profiles + the current power consumption of the smart appliances.

## Smart appliance (is displayed when an smart appliance is connected)

### Available surplus [W]

The available surplus consists of the remaining surplus (production minus consumption) and Smart Energy consumption. This surplus is transferred to the smart appliance as available surplus.

### Consumption [W]

This is the power consumption from EGO Smart Heater.

## Profiles (are only displayed when profiles have been configured)

### Profile 1 - Surplus management

#### Available surplus [W]

The available surplus corresponds to the value transferred to the first profile after amount of power consumed by the smart appliance is deducted (in the example: Profile 1 Surplus management).

#### Consumption [W]

In this example, this is the power consumption from the device connected in Profile 1.

### Profile 2 - Heatrod 3-stage digital

#### Available surplus [W]

The available surplus corresponds to the value transferred to the second profile after amount of power consumed by first profile is deducted (in the example: Profile 2 - Heatrod 3-stage digital).

#### Consumption [W]

In this example, this is the power consumption from the heatrod connected in Profile 2.

The symbols displayed to the right of the current values indicate which switches or relays are active or inactive. In addition, the each corresponding section can be displayed or hidden on top-left above the symbol.

## Smart Appliances

All of the available values are displayed as a current curve graph in the tab Smart Appliances.

The following values are displayed with a EGO Smart Heater as an example:

- Heating power  
The amount of energy supplied (in watts) to operate the heating rod.
- Reported surplus  
The amount of surplus power available from the PV plant.
- Water temperature  
The water temperature recorded at the particular time.
- Device temperature  
The temperature of the heating rod recorded at the particular time.
- Max. temperature  
The maximum heating temperature of the heating rod.



Fig.: Example plant with an EGO Smart Heater and displayed values

The **Date** box offers the option to select a particular day for viewing. The arrow keys can also be used to move to the next or previous date.

The individual values, at the top-right of the graph key, can be displayed or hidden with a mouse click.

The following values are displayed in the curve for IDM heat pumps:

- Power  
The amount of energy supplied (in watts) to operate the heat pumps.
- Reported surplus  
The amount of surplus power available from the PV plant.

## 2.12.7 Accessing CSV Export

To access the CSV Export menu, go to **Diagnostic | CSV Export**.

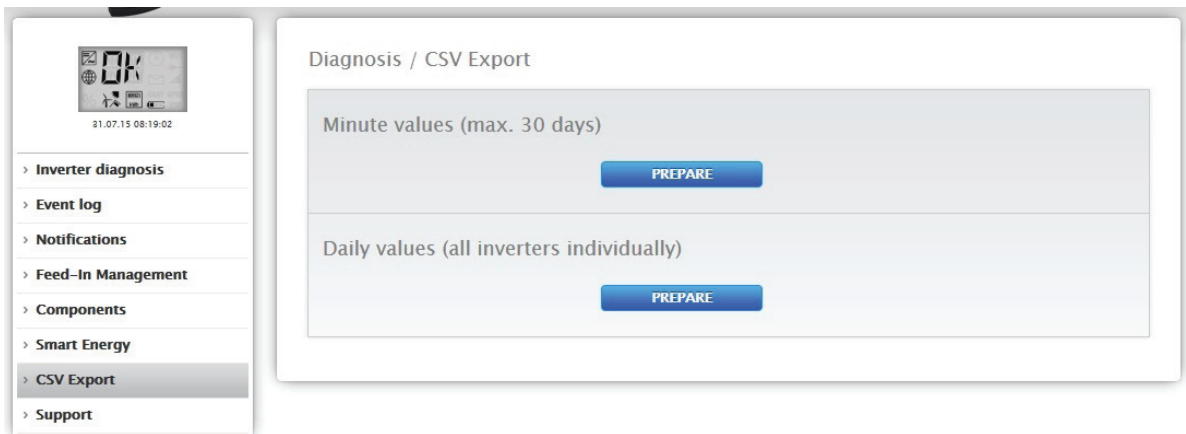


Fig.: CSV Export

You can download a CSV file from your plant from the **CSV Export** menu. You can select between **minute values** or **daily values** for the CSV file.

When Minute Values are selected, the file contains only a maximum of 30 days' worth of values. When selecting Daily Values, all of the inverters are individually listed, but only the end-of-the-day value is documented.

The CSV file with minute values is in a table format and contains the 5-minute values from the last 30 days and the Pac and DC values from the individual inverters and also from every MPP tracker.

The CSV file with day values is in a table format and contains the day values from every individual inverter since the start of the plant's operation (with Solar-Log™ monitoring).

### Note!



Files in the CSV format can be created with simple text editors or spreadsheet programs like MS Excel or Open Office Calc.

### Important!



Only a CSV file with day values can be imported and not a CSV file with minute values.

### Important!



When importing CSV data, all of the data on the device is deleted and replaced.

## 2.12.8 Accessing Support

To access the Support menu, go to [Diagnostic | Support](#).

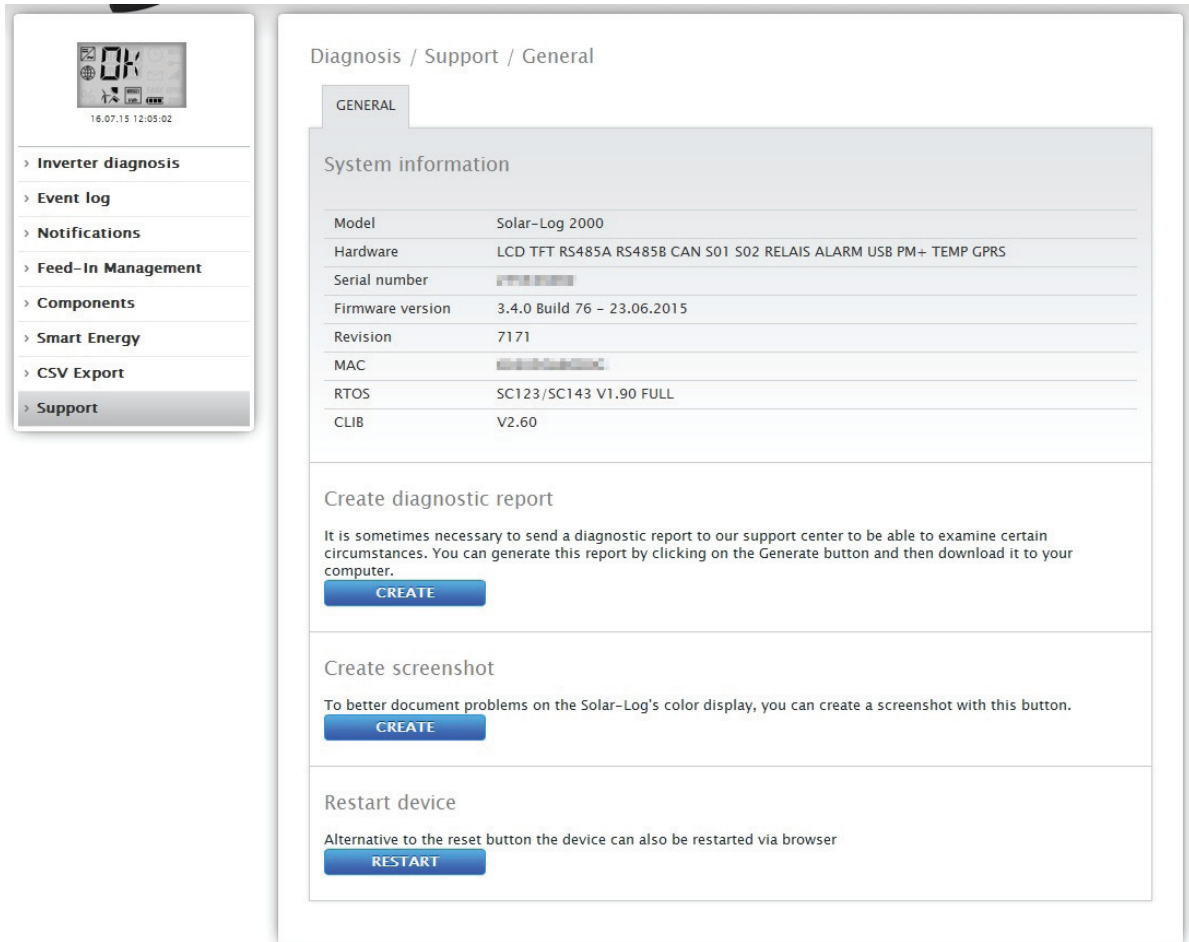


Fig.: Support - General

There are three sections under the [Support | General](#) menu:

- System Information:

The following information is available in this tab:

- Model (type of Solar-Log™)
- Hardware (hardware components available for the device)
- Solar-Log™ serial number
- Firmware Version and date
- Revision number
- MAC (MAC address of the device)
- RTOS (Solar-Log™ operating system)
- CLIB (Version number of the Solar-Log™ library used)

- Creating diagnostic reports:

You have the option to create and download a diagnostic report. This can be sent to Solar-Log support for analysis. See Figure: Support - General.

- Creating screenshots:

You have the option to create and download screenshots of the display in this section. This can be used to document errors on the Solar-Log's internal display. See Figure: Support - General.

- Restart

As an alternative to the reset button the device itself, the Solar-Log™ can be rebooted with the restart button in the WEB menu.

## 3 Notifications

---

### 3.1 Yield E-mail

All three Solar-Log models—300, 1200, 2000—come with an e-mail program that can send a daily overview of the day's performance to two different e-mail addresses (maximum of 57 characters, separated with a semicolon).

The settings are configured under the [Configuration | Notifications](#) menu.

Click on the [Recipient](#) tab to enter the recipient's e-mail address.

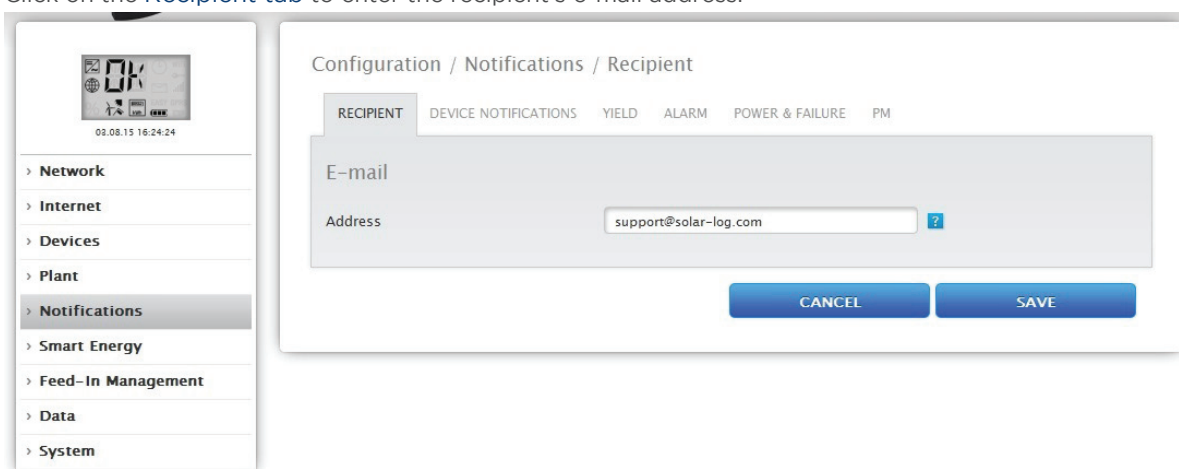


Fig.: Entering the recipient's e-mail address.

In the **Yield** tab, you can define yield notifications to be sent via e-mail or text message (SMS).

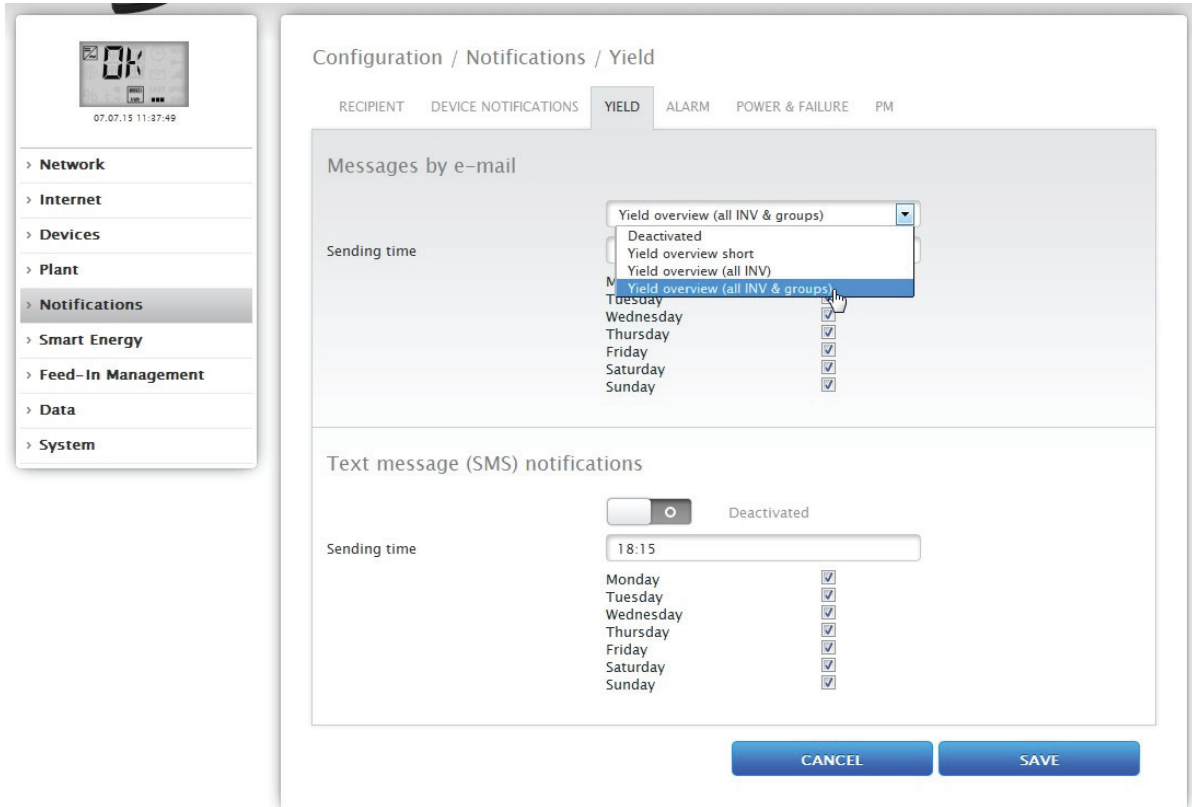


Fig.: Defining Notification times and setting types

The time frame for notifications can be defined here.

There are many types of settings:

- Deactivated
- Yield overview short
- Yield overview (all INV)
- Yield overview (all INV & groups)

**Note!**



See the chapter "Notification Settings" in the Installation Manual for additional information on the notification function.



### 3.1.1 Explanation of the individual E-mail Functions:

#### Deactivated

- When no e-mail notifications are to be sent.

#### Yield overview short

- The yield data from the entire plant is totaled and displayed for the **day, month and year**. See the figure: Screenshot of a yield message.

##### Day:

Total	44.28 kWh
Spec.	0.73 kWh/kWp
Target	154.8 kWh
Act. yield	28 %
Consumption meter	96.44 kWh

##### Month:

Total	2616 kWh
Spec.	43.6 kWh/kWp
Average	153 kWh
Target	2635 kWh
Act. yield	99 %

##### Year:

Total	6560 kWh
Spec.	109 kWh/kWp

Fig.: Example of a yield message

### Yield overview (all INV)

- Yield data is totaled for the entire plant with the totals for every individual inverter (also SO meters) broken down by **day, month and year**. This is then displayed in HTML format as a table. See the figure: Yield overview (all INV) in HTML format.

	Day				Month					Year	
	Total	Spec.	Target	Act. yield	Total	Spec.	Average	Target	Act. yield	Total	Spec.
<b>Total</b>	31.26 kWh	0.70 kWh/kWp	88.31 kWh	35 %	465 kWh	10.5 kWh/kWp	77.5 kWh	531 kWh	87 %	37423 kWh	848 kWh/kWp
INV 3	10.42 kWh	0.70 kWh/kWp	29.43 kWh	35 %	155 kWh	10.5 kWh/kWp	25.8 kWh	177 kWh	87 %	12474 kWh	848 kWh/kWp
INV 1	10.41 kWh	0.70 kWh/kWp	29.43 kWh	35 %	154 kWh	10.5 kWh/kWp	25.8 kWh	177 kWh	87 %	12474 kWh	848 kWh/kWp
INV 2	10.42 kWh	0.70 kWh/kWp	29.43 kWh	35 %	155 kWh	10.5 kWh/kWp	25.8 kWh	177 kWh	87 %	12474 kWh	848 kWh/kWp

	Type	Daily total
<b>Total</b>	-	0.00 kWh
<b>Meter</b>	Consumption meter	0.00 kWh

Fig.: Yield overview (all INV) in HTML format

### Yield overview (all INV & groups)

- Yield data is totaled for the entire plant with the totals for every plant and its inverter (also SO meters) broken down by **day, month and year**. This is then displayed in HTML format as a table. See the figure: Yield overview (all INV & groups) in HTML format.

	Day				Month					Year	
	Total	Spec.	Target	Act. yield	Total	Spec.	Average	Target	Act. yield	Total	Spec.
<b>Total</b>	31.26 kWh	0.70 kWh/kWp	88.31 kWh	35 %	465 kWh	10.5 kWh/kWp	77.5 kWh	531 kWh	87 %	37423 kWh	848 kWh/kWp
House	20.83 kWh	0.70 kWh/kWp	58.87 kWh	35 %	310 kWh	10.5 kWh/kWp	51.6 kWh	354 kWh	87 %	24948 kWh	848 kWh/kWp
INV 3	10.42 kWh	0.70 kWh/kWp	29.43 kWh	35 %	155 kWh	10.5 kWh/kWp	25.8 kWh	177 kWh	87 %	12474 kWh	848 kWh/kWp
INV 1	10.41 kWh	0.70 kWh/kWp	29.43 kWh	35 %	154 kWh	10.5 kWh/kWp	25.8 kWh	177 kWh	87 %	12474 kWh	848 kWh/kWp
Barn	10.42 kWh	0.70 kWh/kWp	29.43 kWh	35 %	155 kWh	10.5 kWh/kWp	25.8 kWh	177 kWh	87 %	12474 kWh	848 kWh/kWp
INV 2	10.42 kWh	0.70 kWh/kWp	29.43 kWh	35 %	155 kWh	10.5 kWh/kWp	25.8 kWh	177 kWh	87 %	12474 kWh	848 kWh/kWp

	Type	Daily total
<b>Total</b>	-	0.00 kWh
<b>Meter</b>	Consumption meter	0.00 kWh

Fig.: Yield overview (all INV & groups) in HTML format

## Explanation of the individual sections of the Yield Overviews

Subject: The Solar-Log serial number and time and date

Day:

Field	Explanation Text
Total	The actual amount of grid feed for the day in kWh.
Specific	Yield specific. The energy yield divided by the amount of generator power installed. (Values are normalized to 1 kWp)
Target	The yield in kWh that can be achieved according to the forecast.
Actual Yield	The percentage of days on which the target was achieved, The daily yield achieved as a percentage in relation to the total/target.
Total yield meter	displays the plant's total yield. (Lines only appear when a total yield meter is available.)
Consumption meter	The consumption is displayed with this meter. The consumption is displayed according to the configuration with several consumption meters (this line only appears when meters are connected).

Month:

Field	Explanation Text
Total	The actual amount of grid feed for the day in kWh.
Specific	Yield specific. The energy yield divided by the amount of generator power installed. (Values are normalized to 1 kWp)
Medium	The average daily production which was achieved for this month.
Target	The yield in kWh that had been achieved up to the current day according to the forecast.
Actual Yield	Displays the percentage of the monthly target that has already been achieved up to the current day. The monthly yield achieved as a percentage in relation to the total/target.

Year:

Field	Explanation Text
Total	The actual amount of grid feed for the day in kWh.
Specific	Yield specific. The energy yield divided by the amount of generator power installed. (Values are normalized to 1 kWp)

### 3.2 Performance Monitoring

To monitor different sized inverters, the Solar-Log™ normalized the value from every inverter to 1 kWp. The Solar-Log™ uses the amount of generator power set in [Configuration | Devices | Configuration](#). The generator power is equivalent to 100% and the value here is normalized to 1 kWp.

Example plant:

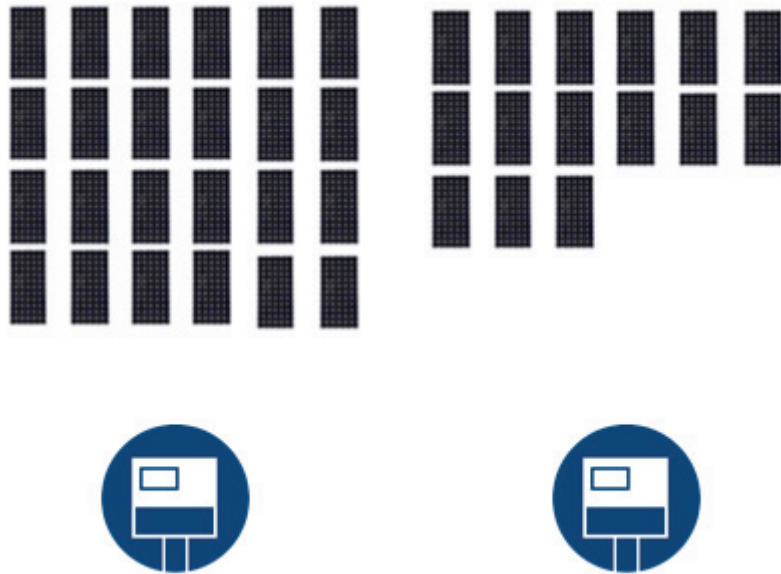


Fig.: Performance Monitoring: Example plant with two inverters

#### Inverter 1, Inverter 1 house

Generator Power:  
 $25 * 220W \text{ (modules)} = 5500 \text{ Wp}$

Module Field 1

#### Inverter 2, Inverter 2 house

Generator Power:  
 $15 * 220W \text{ (modules)} = 3300 \text{ Wp}$

Module Field 1

The Solar-Log™ compares all of the inverters that are located in the same module field. [Settings for the module fields are under Configuration | Devices | Configuration](#).

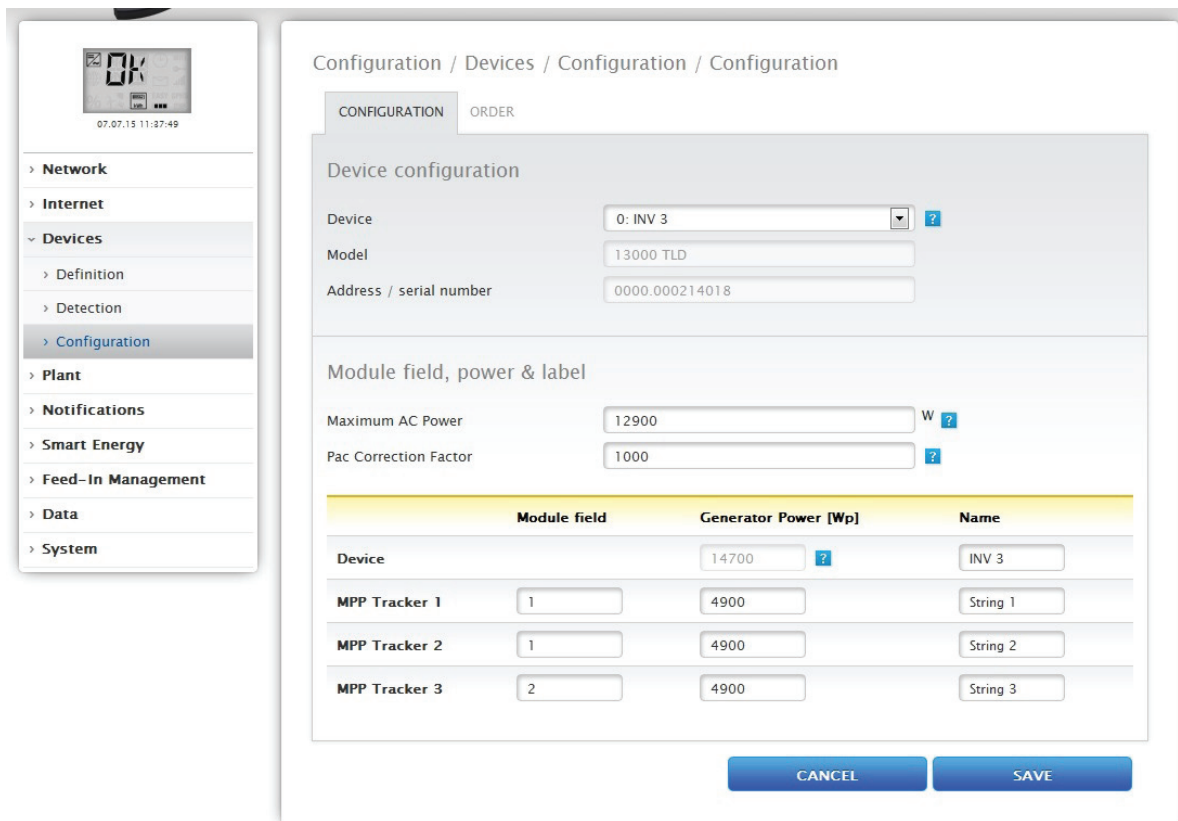


Fig.: Configuring module fields

Performance Monitoring Configuration under Configuration | Notifications.

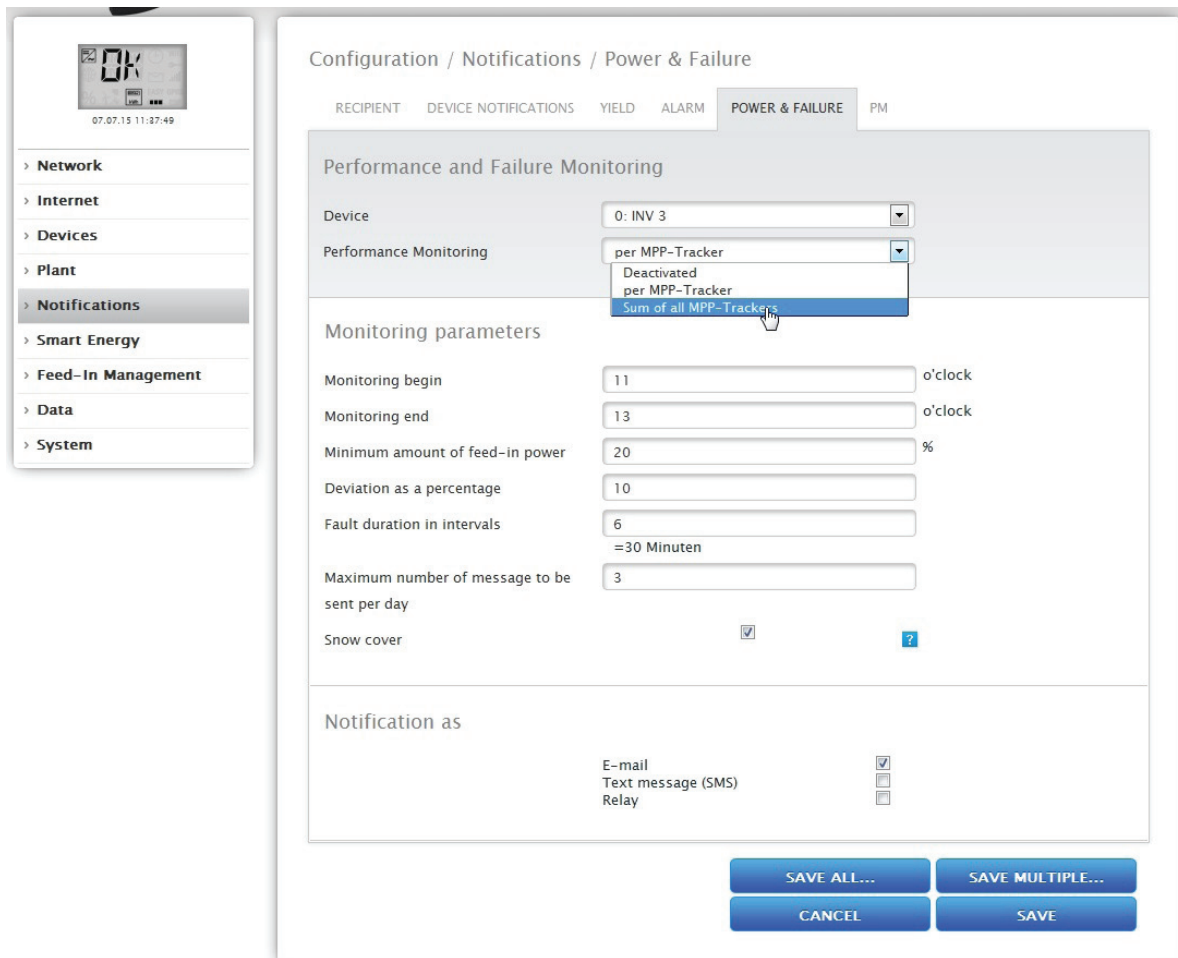


Fig.: Configuring performance monitoring

The output measured from the inverters is contrasted with the generator capacity that is listed in the system.

A notification is sent (by email) when the deviation exceeds the amount configured (for example 10%) over a set time period (for example 30 minutes).

Note!



For performance monitoring configurations, see the chapter "Configuring Notification" in the Installation Manual.

### 3.2.1 Performance Monitoring Notification

Example Notification:

Module Field 1 - Inverter 1 'Inverter 1 House'

IRV = 4916W ( Inverter 2, Inverter 2 House' ), IAV = 3950W, deviation = 19.65 %

The notification contains the following information:

**Module field:**

The module field which was affected or at least the module field in which a deviation was detected.

**Deviating inverter:**

Inverter 1

**IRV:**

The reference value that is used to contrast inverters. It comes from the most effective operating inverter, the value is in W.

**IAV:**

The amount of output from inverter with a deviation.

**Dev:**

The amount of deviation as a percentage of the reference value.

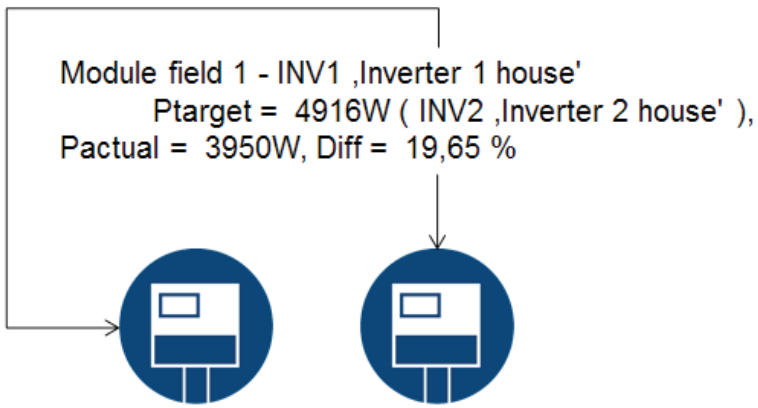


Fig.: Performance Monitoring with notification and inverter

Inverter 1, Inverter 1 house		Inverter 2, Inverter 2 house
Generator Power=	5500 Wp	3300 Wp
Current power output	= 3950 W	= 2950 W
Current efficiency	= 71.81 %	= 89.39 %
	Inverter with a deviation	Reference Inverter

Inverter has generated the most power with its value of 0.8939 and is thus used as the **reference inverter**.

### 3.2.2 Calculation and Explanation of the Notification

In regard to the reference inverter, inverter 1 is compared to all of the inverters in the same module field (in the example only output is used).

A deviation of 19.65% is determined based on the comparison of the generator capacity and IRV forecast.

#### Calculating the Deviation for Inverter 1

##### Deviation Calculation

Inverter 1 IRV calculation	$(5500 \times 89.39)100=$ IRV 4916 W
Efficiency of Inverter 1	$(3950 \text{ W} / 5500 \text{ W}) * 100=$ 71.81%
This corresponds to 71.81 % of the generator power or a value of 0.7181 kWp.	

##### Deviation as a percentage

IRV Inverter 1 - IAV Inverter 1	$4916 \text{ W} - 3950 \text{ W} =$ 966 W
Deviation as a percentage	$(966 \text{ W} / 4916 \text{ W}) * 100 =$ 19.65 %

Inverter 2 is used as the reference inverter since it was the most effective one at the time of the measurement. Inverter 1 should have produced an output of 4916 W based on the measurement and the calculations comparing all of the inverters in the same module field. The actual output was 3950 W, a deviation of 19.65%. This caused a notification to be sent.



## 4 Operating the Solar-Log 1200 and 2000 via Touch Display

The Solar-Log 1200 and 2000 are equipped with a touch screen that allows power output, yield history and environmental performance to be quickly displayed. Data can also be transferred to and from the USB sticks via the display.

### Note!



Never use a sharp, pointed object on the touch screen!  
This will damage the screen's delicate surface.

### 4.1 Navigating from the touch screen

After the Solar-Log 1200 or 2000 has started, the overview view is displayed.

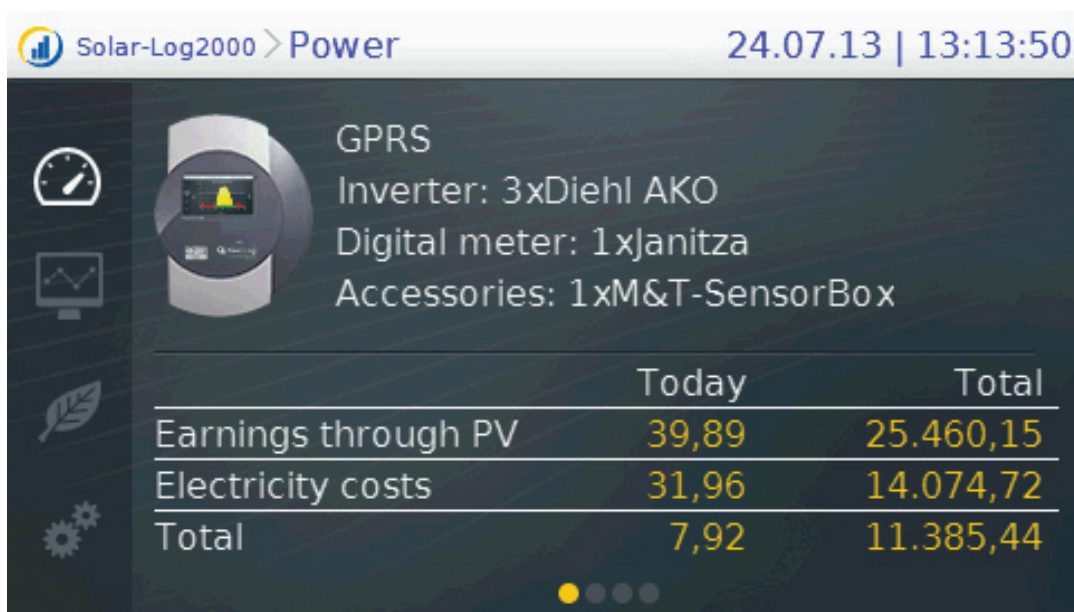


Fig.: Start page of the display

The following is displayed in this view:

the header bar with

- the Solar-Log™ module
- navigation heading
- date
- Time

The following symbols are displayed in the left-side navigation menu and can be selected for additional options:



Power



Yield History



Environmental performance



Settings

The display window with:

- Solar-Log™ type
- the connected devices (inverter, power meter etc.)
- A table with the following values: earnings from PV, purchased power (only with connected meters) and the total for the day and overall.

Swipe your fingers on the display, either from right to left or left to right, to switch to the next view.

There is a split-screen window for the energy balance, environmental performance and yield history menus.

The dots at the bottom of the screen (  ) indicate the current page of the menu.

You can always view the power output for the current day by tapping on the top area with the time and date. The current Dashboard is displayed by tapping on it twice.

## 4.2 Accessing the Dashboard

From the Power menu, you can swipe to go from the start page to the Dashboard.

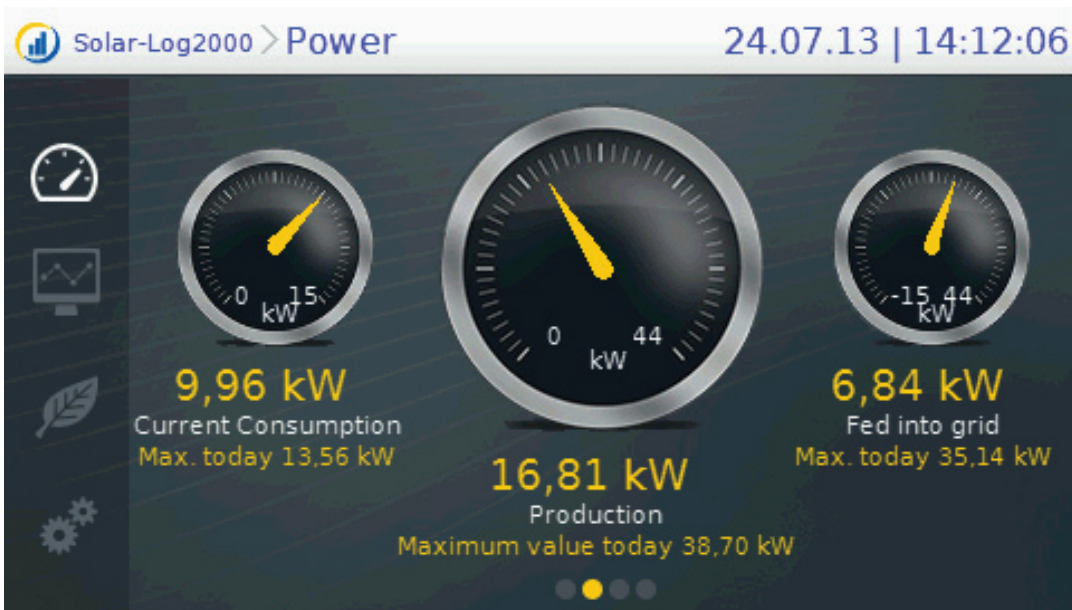


Fig.: Dashboard view

In the view from left-to-right:

Current consumption and today's consumption high (only with connected meters).

Current production and today's production high

Current grid feed and today's grid feed high (only with connected meters)

## 4.3 Accessing the Energy Balance

From the Power menu, you can swipe from the start page to go to the Energy Balance.

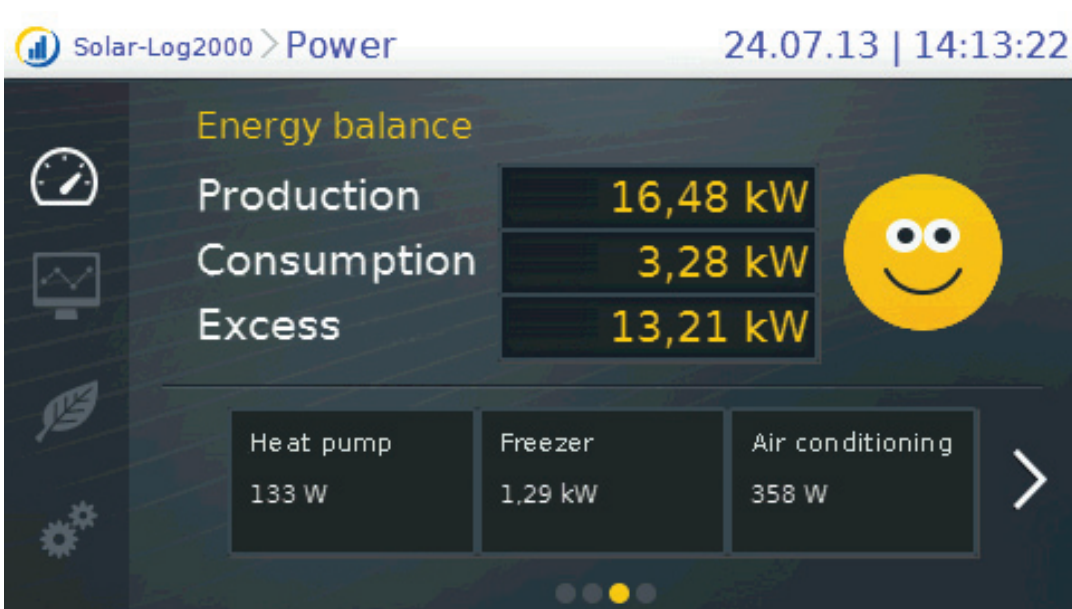


Fig.: Energy Balance view

The energy balance is a split-screen window. The top part of the window displays the following values:

**Production:**

- Current plant production.

**Consumption:**

- Current power consumption (only with connected meters).

**Surplus:**

- Current grid feed (only with connected meters).

The bottom window displays the connected appliances with their current consumption values. Use the arrows to display additional appliances.

**Note!**



Values are only visible if appliances are connected via networked "smart plugs", relays or the Solar-Log™ Meter.

**Note!**



Up to 10 appliances can be connected and configured.

## 4.4 Accessing Forecast

Swipe in the Power menu to go to the forecast.

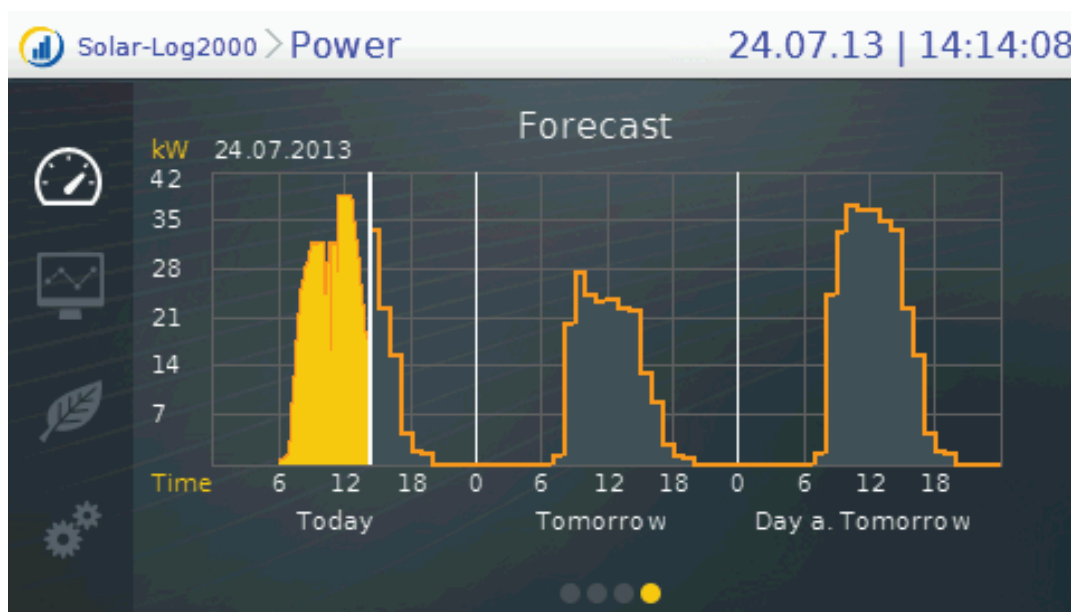


Fig.: Forecast view

The weather data is updated in the morning and in the evening with the Forecast view. The values for the current day and the next two days are calculated based on this data and shaded in gray.

This is automatically asked with the Classic 2nd Edition. This has to be entered in the inverter details with the Commercial Edition.

Note!



It is required to be registered and logged into our portal Classic 2nd or "Commercial Edition" to display the forecast on the Solar-Log™.

Note!



Plant location and the alignment and inclination of the module need to be configured in the portal to receive daily weather updates.  
The weather data is transfer to the Solar-Log™ in the morning and in the evening.

## 4.5 Accessing Yield history

The Yield history is accessed in the left navigation with the Yield History symbol.

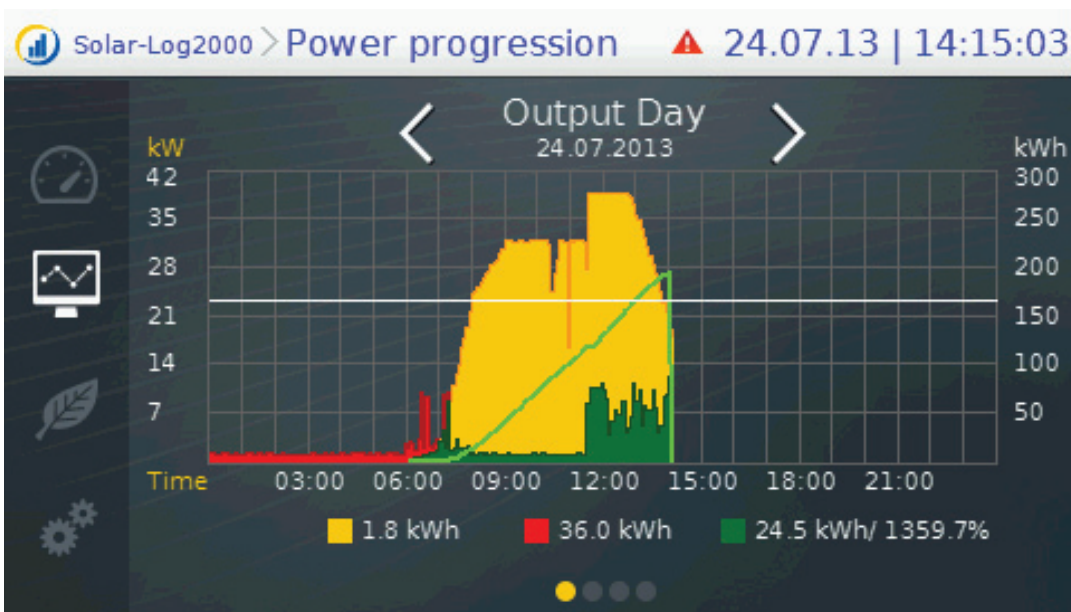


Fig.: Yield history - Day

The Yield history view is displayed in two sections:

In the top part, you have the option, depending on the display mode (year, month, year), to swipe on the display to go to the exact date.

In the bottom part, you can swipe to the next display mode: day, month, year or total.

## 4.6 Accessing Environmental performance

The Environmental performance is accessed in the left navigation with the Environmental performance symbol.

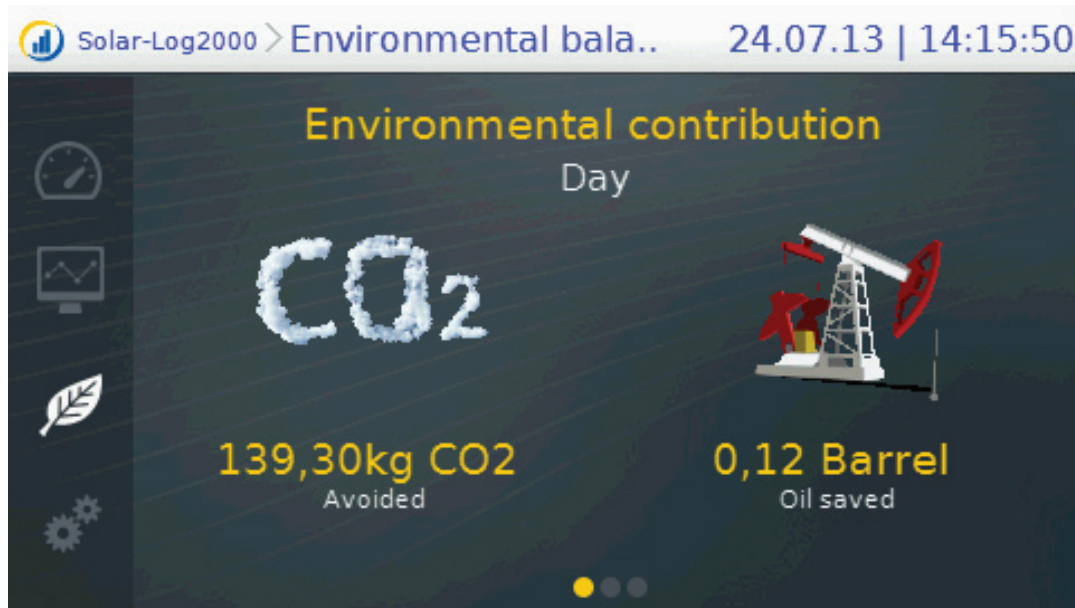


Fig.: Environmental performance - Day view

The Environmental performance view is displayed in two sections.

The top display contains:

- Day
- Month
- Year
- Total

The bottom display contains the values for your plant's environmental contributions:

- Avoided CO<sub>2</sub> emissions
- Oil saved
- Reduced nuclear waste
- Trip with an electric car in kilometers
- Trees saved
- Households (energy needs for a family of four)

## 4.7 Accessing the USB menu

The USB menu is accessed in the left navigation with the USB menu symbol.

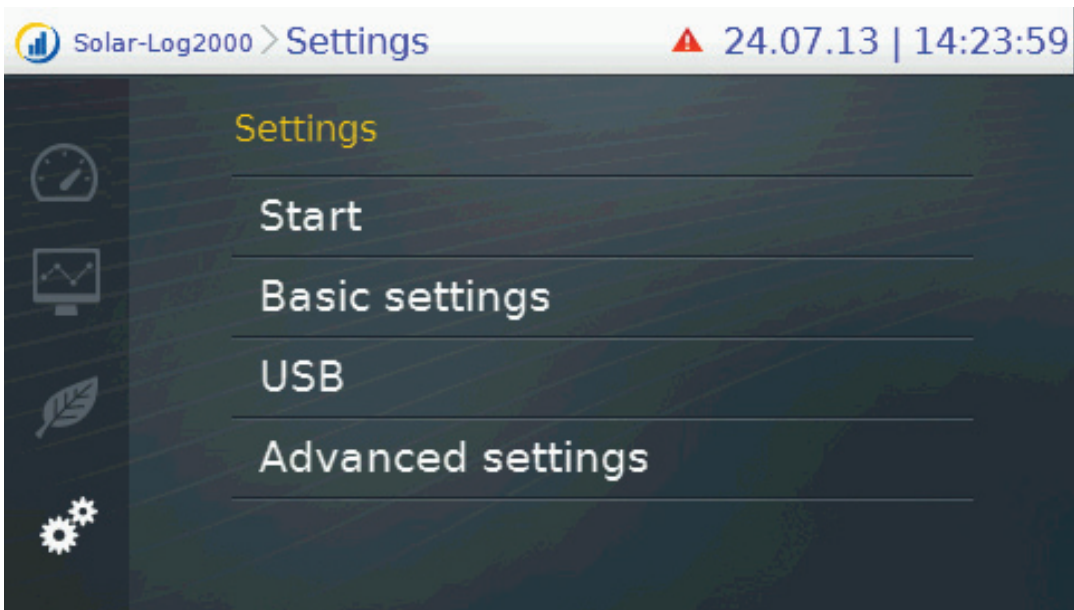


Fig.: Menu Settings

This brings you to the main **Settings** menu. Tap on **USB**.

The sections:

- Start
- Basic settings
- Advanced settings

are described in detail in the chapter "Direct Device Configurations" in the Installation Manual.

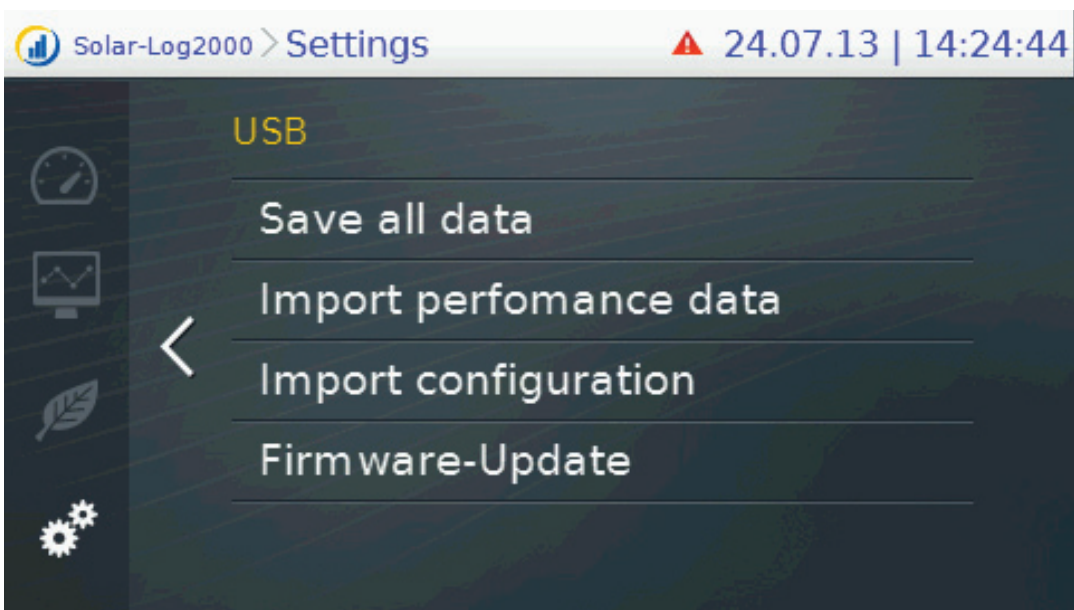


Fig.: USB menu

You have the following options from the USB menu:

**Save all data:**

- The Solar-Log™ creates the folder "backup" on the stick and saves the solarlog\_backup.dat and solarlog\_konfig.dat files there.

**Import yield data:**

- The Solar-Log™ searches for a valid solarlog\_backup.dat file on the USB stick and imports it.

**Import configuration:**

- The Solar-Log™ searches for a valid solarlog\_konfig.dat file on the USB stick and imports it.

**Firmware update:**

- The Solar-Log™ searches for a firmware update to import and then starts the update.

**Note!**



For technical reasons, only the last 30 days of minute values are saved in a backup. To maintain a permanent record of your data (including minute data), we recommend registering your Solar-Log with our Classic-2nd Edition or Commercial Edition portal.

**Note!**



As soon as a USB stick has been plugged in, the folder named "Backup" is automatically created on the USB stick. At the end of the day, the Solar-Log™ saves a daily backup with the date in this folder.

**Important!**

The Solar-Log™ does **not** overwrite the daily backup files. Thus it is important to regularly backup or exchange the USB stick before it runs out of space.

**Important!**



When importing data from the USB stick, all of the data on the device is deleted and replaced.

**Note!**



Import the current configuration before importing saved yield data.



## 5 Operating the Solar-Log 500 and 1000 via the Display

---

### 5.1 Display Solar-Log 500

In addition to the web interface described above, the Solar-Log 500 also has a two-line text display on which the current power data can be displayed.

The following values are displayed at regular intervals.

Name	Unit	Meaning
Feed-in power Pac	W	Current amount of feed-in power P on the AC side
Generator Power Pdc	W	Current amount of feed-in power P on the DC side (Solargenerator) If only one multi-string inverter has been selected, the individual strings are displayed separately.
YDay	kWh	Daily yield
Y-spec	Wh/Wp	Specific power "performance in kW/kWp." After that, all of the values will be comparable in regard to their specific output. Diminishing module performance can also be recognized.

### 5.2 Display Solar-Log 1000

The Solar-Log 1000 comes with a touchscreen that allows for quick and easy access to performance data, diagnostic information and inverter logs. It also allows a data transfer to be performed via USB.

**Note:**



Never use a sharp, pointed object on the touch screen!  
This will damage the screen's delicate surface.

Note!



The screen saver is activated after a few minutes. You can set the number of minutes to wait until the screen saver is activated in the configuration menu. Refer to the Installation Manual for information on the settings in the configuration menu.

### 5.3 How to Navigate with the Touchscreen

Tap your finger on the display.

- After touching the screen, the overview is displayed.

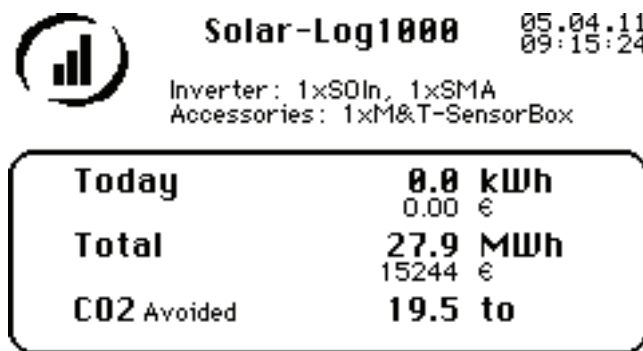


Fig.: Home Screen

After the display of the Solar-Log 1000 has been touched, it automatically displays the yield for the current day, the total yield for the plant and the amount of CO2 avoided.

Tab your finger on the display again.

- The main navigation screen is displayed.

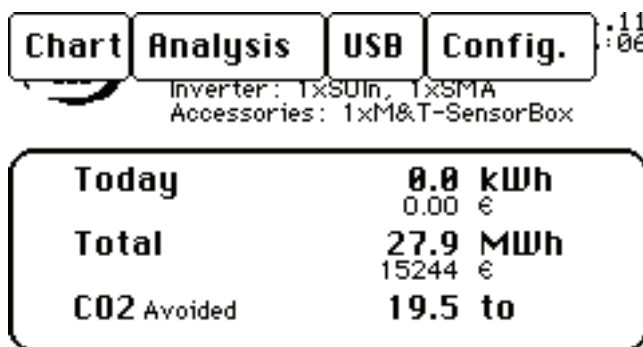


Fig.: Display's Main Navigation Screen

The main navigation screen displays four sections:

#### Graphic

The yield data can be accessed here.

#### Diagnosis

Here, you can access the system notifications, acknowledge alarm messages and adjust self-consumption.

#### USB

If the device is not connected to a local area network (LAN), a USB stick can be used to backup and restore data. The USB connection can also be used to update the firmware on the Solar-Log™.

### Configuration

The configuration menu allows you to change settings and to make adjustments to the device's software. Please refer to the Installation Manual for more information.

## 5.4 Accessing Yield Data

Tap your finger on the display.




- The main navigation screen is displayed.

Tap on Graphic.

- Different yield periods are displayed.

Tap on the overview to return to the overview of the current values.

### 5.4.1 How to navigate between different overviews

Symbol	Meaning
 	Arrow button to move to the previous and next displayed time period.
	The "back" button closes the window that is currently open.

## 5.4.2 The meaning of the values in the overviews

The following table contains the values and their meaning in alphabetical order.

Name	Unit	Meaning
CO <sub>2</sub>	to	The amount of carbon dioxide emissions that have been avoided based on the power output.
Y-current	kWh	The current yield for the selected period
Yield Current/Target	%	The current value displays the ratio of the current yield to the target yield for the selected period.
Y-max	kWh	The maximum yield for the selected period.
Y-min	kWh	The minimum yield for the selected period.
Y-avg	kWh	The average output for the selected period.
Energy	kWh	The total output for the day
Y-target	kWh	The Solar-Log™ runs a forecasting statistics function that specifies a certain target value for each month. If the target value or higher has been achieved, the forecasted output has been produced.
Y-spec	Wh/Wp	The energy yield divided by the maximum power. This value is a good reference value when comparing plants.
Pac	Watt	Current amount of feed-in power P on the AC side.
Pdc	Watt	Current amount of feed-in power P on the DC side (Solargenerator) If only one multi-string inverter has been selected, the individual strings are displayed separately.
P-max	Watt	Maximum output for the day.
EF	%	The current efficiency from the generator power and feed-in power. The manufacturer's specification on the inverter's efficiency can be checked here.

### 5.4.3 Daily Graph

Tap your finger on the display.

- The main navigation screen is displayed.

Tap on Graph and then on the Day.

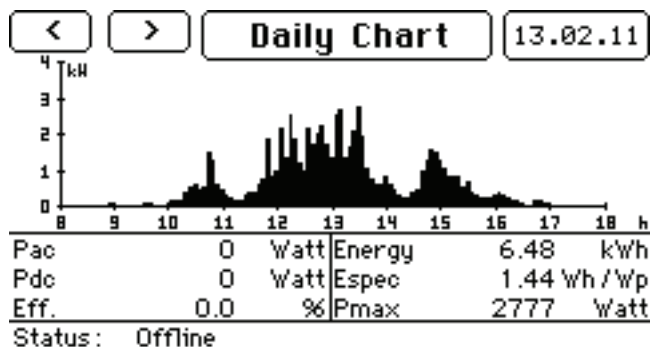


Fig.: Daily Graph

Tap on the day's date to display the information for that day.

Tap on the Daily Graph to display the yield values for the connected inverters.

- The settings menu window is displayed.

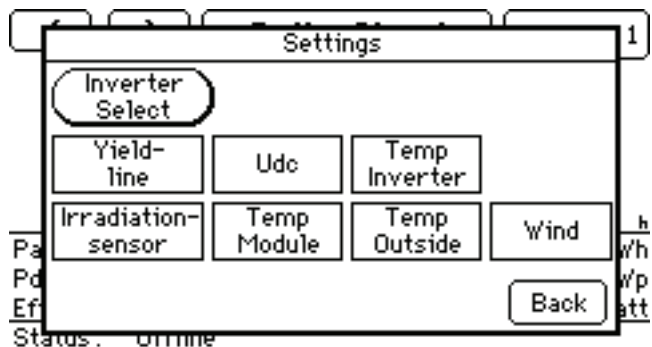


Fig.: Graphic Settings

Tap on INV Selection to select the desired inverter.

- The Total Plant menu window is displayed.

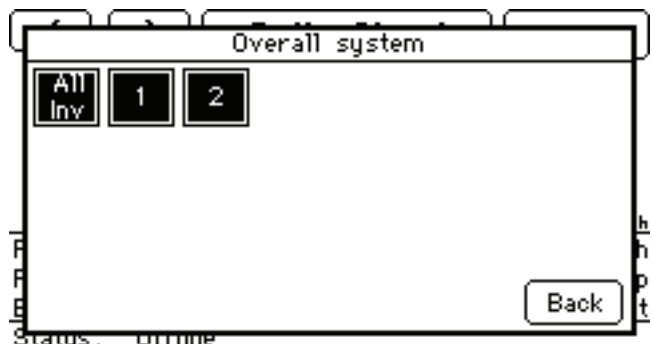


Fig.: Total Plant Graphic

Select the desired inverter and tap on "Back."

- The values from the selected inverter are displayed.

Tap on the [Daily Graph](#) to display the additional measured values.

Select the desired view and tap on "Back."

- The selected setting is displayed.
- If you selected the [yield curve](#), the target value is also displayed.

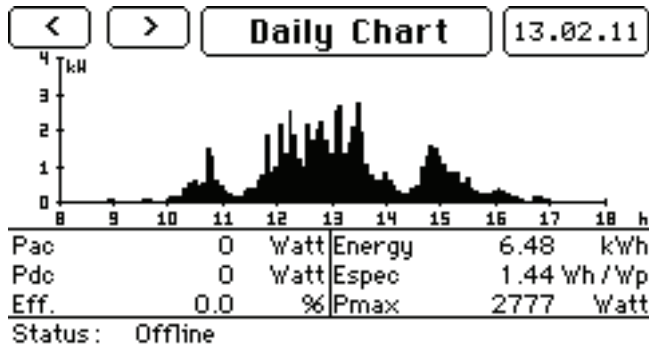


Fig.: Daily Graph

Tap on the [display](#) to access the main [Main Navigation](#).

#### 5.4.4 Monthly Graph

Tap your finger on the display.

- The main navigation screen is displayed.

Tap on [Graph](#) and then on the [Month](#).

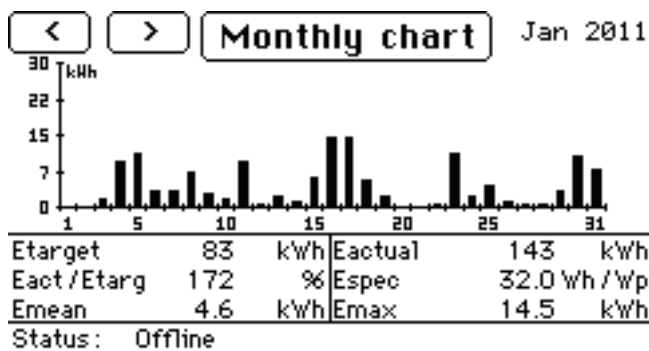


Fig.: Monthly Graph

The monthly graph displays the current values for the selected month.

Tap on the displayed bar to view the [Daily Graph](#) for the selected day.

Tap on the [Monthly Graph](#) to display the yield values for the connected inverters.

- The [Total Plant](#) menu window is displayed.

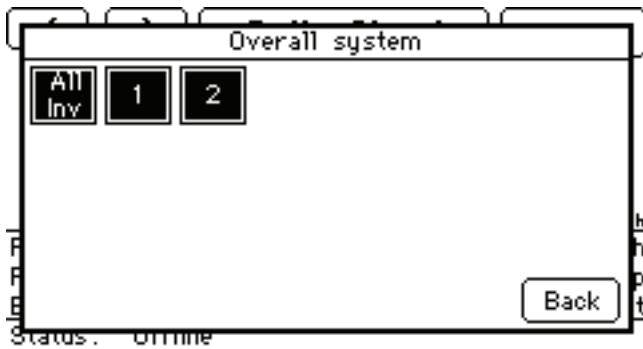


Fig.: Total Plant

Select the desired inverter and tap on **Back**.

- The values from the selected inverter are displayed.

Tap on the display to access the Main Navigation.

### 5.4.5 Yearly Graph

Tap your finger on the display.

- The main navigation screen is displayed.

Tap on **Graph** and then on the **Year**.

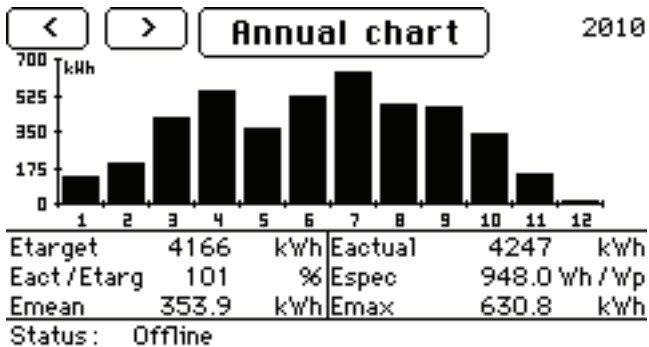


Fig.: Yearly Graph

The yearly graph displays the current values for the selected year.

Tap on the displayed bar to view the Monthly Graph for the selected month.

Tap on the **Yearly Graph** to display the yield values for the connected inverters.

- The Total Plant menu window is displayed.

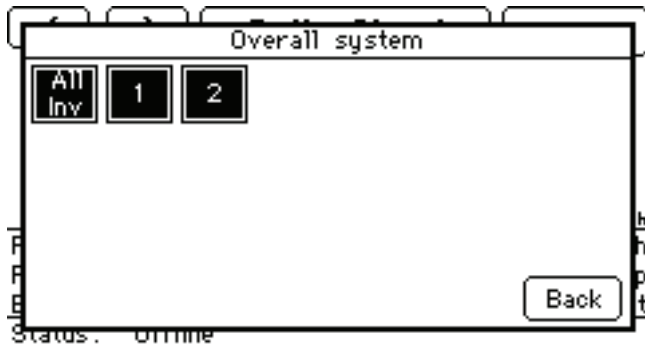


Fig.: Total Plant

Select the desired inverter and tap on **Back**.

- The values from the selected inverter are displayed.

Tap on the display to access the Main Navigation.

### 5.4.6 Overall Graph

Tap your finger on the display.

- The main navigation screen is displayed.

Tap on **Graph** and then on the **Total**.

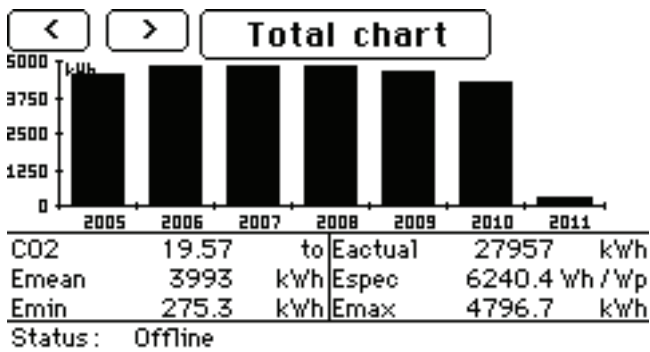


Fig.: Total Graph

The total graph displays the values for the plant since it has been monitored by the Solar-Log™.

Tap on the displayed bar to view the Yearly Graph for the selected year.

Tap on the **Total Graph** to display the yield values for the connected inverters.

- The Total Plant menu window is displayed.



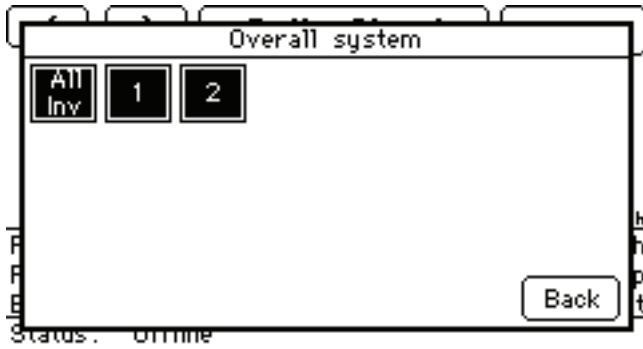


Fig.: Total Plant

Select the desired inverter and tap on **Back**.

- The values from the selected inverter are displayed.

Tap on the display to access the Main Navigation.

### 5.4.7 Large External Display

Tap your finger on the display.

- The main navigation screen is displayed.

Tap on **Graph** and then on the **Large external display**

- The detailed view of the current yield values is displayed.

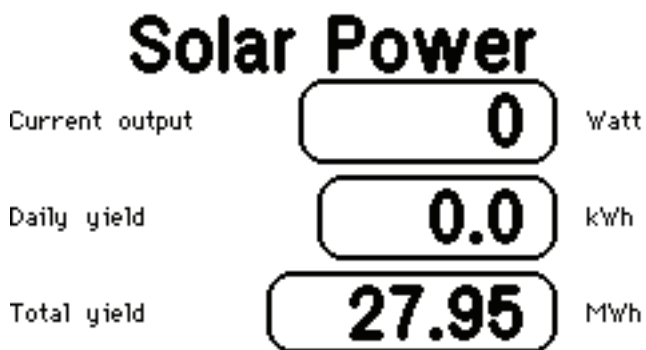


Fig.: Large External Display

The large external display presents the current output of your plant.

Tap on the display to access the Main Navigation.

### 5.4.8 Power Balance

If a power meter with the type "consumption meter" is set up on the Solar-Log 1000, the Power Balance menu appears on the touchscreen.

Tap your finger on the display.

- The main navigation screen is displayed.

Tap on Graph and then on the Power Balance.

- The detailed view of the current yield values is displayed.

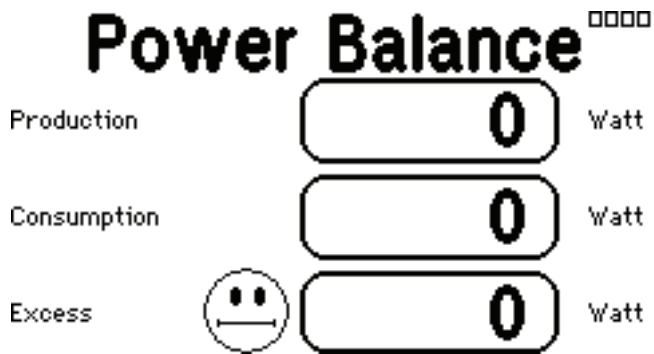


Fig.: Power Balance

The Power Balance displays the current yield, the current consumption and the difference between these two values.

If more electricity is obtained from the grid than what is fed into the grid, the excess value will be negative and a frowning face is displayed.

Tap on the display to access the Main Navigation.

## 5.5 Accessing the Diagnosis

The diagnosis menu allows you to access to device logs. You can view all of the errors, faults and status changes from the connected inverters.

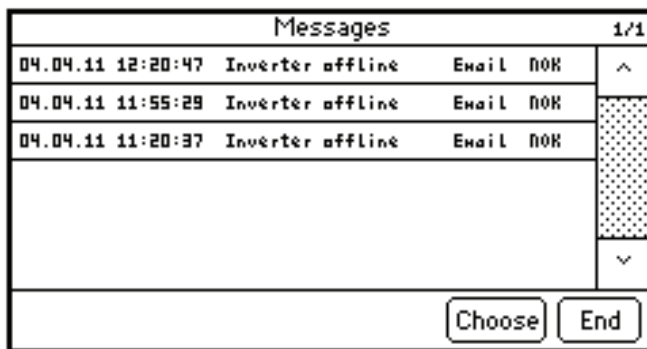
### 5.5.1 Accessing Notifications

Tap your finger on the display again.

- The main navigation screen is displayed.

Tap on **Diagnosis** and then on **Notifications**.

- A list of notifications appears on the display.



The screenshot shows a screen titled "Messages" with a "1/1" indicator in the top right corner. It displays a list of three notifications, each with a timestamp, a description, and a status. The notifications are:

Timestamp	Description	Status
04.04.11 12:20:47	Inverter offline	Email NOK
04.04.11 11:55:29	Inverter offline	Email NOK
04.04.11 11:20:37	Inverter offline	Email NOK

Navigation arrows (up and down) are visible on the right side of the list, and "Choose" and "End" buttons are located at the bottom of the screen.

Fig.: Notifications

Select the desired notification from the list.

- The details of the notification are displayed.

Tap on **Next** to display the next notification or to return to the notification list.

Tap on **End** to close the notification list.

## 5.5.2 Display the Inverter Events

Tap your finger on the display again.

- The main navigation screen is displayed.

Tap on **Diagnosis** and then on **INV Event Log**.

- A list of events from the connected inverters is displayed.

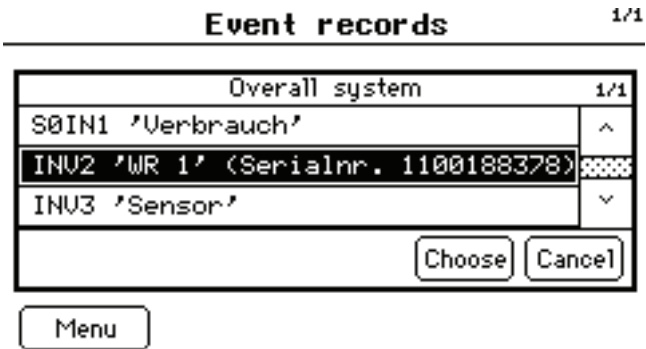


Fig.: Inverter Event Log

Select the desired inverter from the list.

- The event record for the selected inverter is displayed.

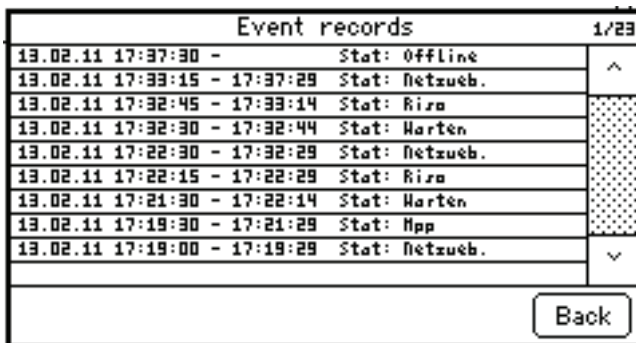


Fig.: Inverter Event Log

Tap on **Back**.

- A list of events is displayed.

Tap on **Menu**.

- The main navigation screen is displayed.

### 5.5.3 Handling Alarm Notifications

You can acknowledge fault notifications in this menu.

Tap your finger on the display again.

- The main navigation screen is displayed.

Tap on **Diagnosis** and then on **Alarm Contact**.

- The alarm monitoring status is displayed.



Fig.: Alarm contact

Tap on **Acknowledge Alarm Manually**.

- The alarm notification stops.

After the fault has been resolved, tap on **Reset Alarm**.

- This resumes the operating mode.

Tap on **Menu**.

- The main navigation screen is displayed.

### 5.5.4 Optimizing the consumption of self-produced power

To specifically concentrate your power consumption at times when there is sufficient power production, the Solar-Log 1000 offers the option to automatically turn on and off up to 10 appliances as needed. The appliances are displayed as "Switches" on the display.

The control of the devices is based on the current power surplus, e.g. "production minus consumption." If no consumption meters are connected, the management is based purely on the power production values.

#### Note!



Refer to the Installation Manual for the switch settings or contact your installer.

## 5.6 Using Data Transfer with USB

If your Solar-Log 1000 is not connected to a local area network (LAN), you can use a USB stick to transfer data, event logs and settings.

The USB connection is located at the top of the Solar-Log 1000 underneath the cover. You also need a USB stick with the FAT32 format (USB 2.0).

- Remove the cover from the top of the case by pulling it forward and plug the USB stick in the port labeled USB.

### 5.6.1 Create a Backup

You can also use a USB stick to create a backup. You have the following selection possibilities:

- Save the yield and settings data or
- copy yield data saved on the USB stick to the device or
- copy settings saved on the USB stick to the device.

**Important!**



When importing data from the USB stick, all of the data on the device is deleted and replaced.

Tap your finger on the display again.

The main navigation screen is displayed.

Tap on **Diagnosis** and then on **Backup**.

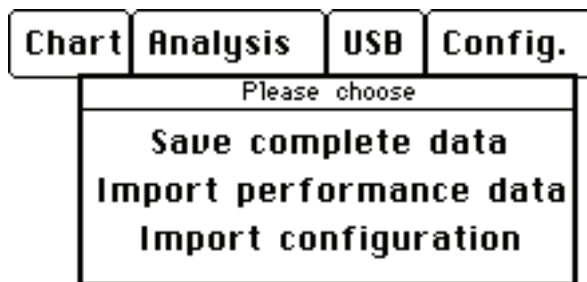


Fig.: USB Backup Selection Menu

Select the desired **Option**.

## Saving all of the data



Fig.: Starting USB Backup

Tap on Start Backup.

- The current data from the Solar-Log 1000 is copied to the USB stick. It can take several minutes to copy all of the data depending on the amount of data.

Tap on Cancel if you do not want to start a backup.

- The main navigation screen is displayed.

### Note!



For technical reasons, only the last 30 days of minute values are saved in a backup. To maintain a permanent record of your data (including minute data), we recommend registering your Solar-Log with our Classic-2nd-Edition or Commercial Edition portal.

## Import configuration

Tap on import Configuration



Fig.: Importing USB Configuration

Tap on Search Backup.

- The device searches the USB stick for a backup directory and copies the data. It can take several minutes to copy all of the data depending on the amount of data.

Tap on Cancel if you do not want to transfer the configuration settings.

- The main navigation screen is displayed.

## Import yield data

Note!



Import the current configuration before importing saved yield data.

Tap on **Import Yield Data**.



Fig.: Importing USB Yield Data

Tap on **Search Backup**.

- The device searches the USB stick for a backup directory and copies the data. It can take several minutes to copy all of the data depending on the amount of data.

Tap on **Cancel** if you do not want to transfer the yield data.

- The main navigation screen is displayed.



## Updating the firmware

The Solar-Log™ firmware can be updated via the USB connection.

Go to our website to download the current firmware version:

<http://www.solar-log.com/de/service-support/firmware.html>.

1. Select the Solar-Log 1000 and copy the firmware to the USB stick.
2. Plug the USB stick into the Solar-Log 1000.
3. Tap on **USB** in the main menu.
4. Tap on Update Firmware.

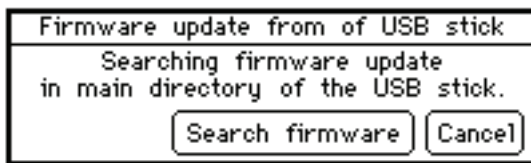


Fig.: USB Firmware Update

5. Tap on **Search Firmware**.
6. The current firmware is located on the USB stick and imported.

### Note!



Clear your Internet browser's cache after the update.

7. Tap on **Cancel** if you do not want to update.
  - The main navigation screen is displayed.

## 5.7 Changing settings in the configuration menu

The configuration menu allows you to change settings and to make adjustments to the device's software. Although the device should be pre-configured by your installer, it may happen that you would like to make adjustments such as changing your password and changing the network settings when, for example, you get a new router.

- Contact your installer for changes to your configuration.
- If you would like to make the changes yourself, you can download the Installation Manual from our website.

## 6 Pac Correction Factor

---

At photovoltaic plants, several measuring points and power generators (inverters) are combined with one another. The Solar-Log™ evaluates this data and partially looks for any correlations.

Since some of the components are not calibrated, deviations in the values measured can easily arise.

For example, if the total amount of energy produced based on what the inverters display is compared with the values from calibrated power meters, deviations of up to 8% can arise.

In practice, meters and inverters both can display too much or too little kWh.

To correct these inaccuracies in the medium term, the Solar-Log™ firmware uses a PAC correction factor.

The PAC correction factor is located in the [Configuration | Devices | Configuration](#) menu.

### 6.1 Calculating the PAC correction factor

All yield data are always stored internally without any correction factor. This factor is applied only when the data are displayed. The factor can therefore be adjusted at any time.

The formula for calculating the correction factor is as follows:

$(\text{Yield power meter} / \text{yield inverter}) * 1000$

If the inverter does not have a display, it is advisable to use the values which are recorded by the Solar-Log™ from a period over a week.

That is why it is recommended to leave the default PAC correction factor at 1000 initially.

The correction factor can be adjusted yearly after receiving the statement from the utility company.

Example calculation:

Inverter 1	Inverter 2	Calibrated power meter
Total energy	Total energy	Total energy
259.12 kWh	305.22 kWh	550.55 kWh
Total = 564.34 kWh		Deviation= 13.79 kWh

By comparing the values, you see that the inverters are more likely to display too much output.

#### Pac Correction Factor

Calibrated power meter total energy	Inverter total energy
550.5 kWh	564.34 kWh

Calculated PAC correction factor in the example:

$$(550.55 \text{ kWh} / 564.34 \text{ kWh}) * 1000 = 975.66$$

Rounded PAC correction factor = 976

## 7 Using the Solar-Log WEB

---

With the Solar-Log™ WEB, you can access your plant's yield data and event log via the Internet and set yield and fault notifications to be sent to an e-mail address daily. A Solar-Log™ WEB account is required. The portal offers additional functions which can be tailored to your needs. Please contact your installer for more information or check out our website:

<http://www.solar-log.com/en/products-solutions/solar-logtm-web.html>

### 7.1 Registering for Solar-Log™ WEB "Classic 2nd Edition"

The Solar-Log™ WEB "Classic 2nd Edition" online registration is very simple. Start your browser and go to the Solar-Log™ WEB registration site:

<http://home.solarlog-web.co.uk/>

Select [Register](#) from the menu on the left.

The registration form then appears.

USER:  PASSWORD:    

**Solar-Log™**

**Solar-Log™ Warranty**

- 60-month warranty
- No cost for repairs
- No cost for replacement parts

**Registration**  
Solar-Log™ WEB „Classic - 2nd Edition“

**Plant data**

Serial Number Solar-Log™:  [Where can I find the serial?](#)

Easy Installation Code\*:  [Where do I find the Easy Installation Code?](#)

Publicly visible:  Yes  No [What does this mean?](#)

**Location data**

Title:

First name:

Last name:

Company\*:

Street / house no.:

Postcode:

Town:

Country:  [Other country?](#)

State:

**Contact information**

Email address:

Email address (confirmation):

Please make sure that your email address is correct.

Telephone\*:

Mobile phone\*:

Fax\*:

Language:

**Terms & Privacy Policy**

Please confirm that you have read and agree our [Terms](#) and the [Privacy Policy](#).

I have read and agree the [Terms](#).

 Please enter the keyword contained in the image on the left one.  [Why this check?](#)

\* optional information

Fig.: C2 registration

Enter your device's Serial Number.

The serial number (SN) is located under the top cover.

Select whether the data should be publicly visible on the Internet or not.

Your plant information can then be viewed by other portal users. When you select "No," then you have to log on to the site with your user data that you will receive from Solare Datensysteme GmbH once the registration process has been completed.

The "Public Visibility" setting can be changed later at any time from your site's configuration menu.

Enter your location and contact information.

Confirm that you have read our General Terms & Conditions (GTC) and Privacy Policy.

Enter the password from the image. This system is used to prevent bots from trying to access our server. Confirm the information entered by clicking on [Register Now](#).

If you forgot to enter a password or entered the wrong one, a new password is automatically generated again without having to reenter all of the information.

After the registration has been successfully completed, you will receive a confirmation e-mail. After you have confirmed the registration, we will check your data and activate your account.

Note!



Accounts are only activated during the week. This can take up to 24 hours.

## 7.2 Accessing Plant data

Start your browser and go to the Solar-Log™ WEB start page. Enter the URL that you received in your confirmation e-mail in the address bar.

For example: <http://home.solarlog-web.co.uk/>

The welcome screen is displayed.

Fig.: C2 registration site

### Logging on to the Solar-Log™ WEB

If you did not activate Public Visibility for your plant during the registration, you have to log on to Solar-Log™ WEB first. You can skip logging on if Public Visibility is activated.

Enter your User and Password in the header bar and then click on LOG ON.

### Accessing the Plant overview

To display plants click on Plants from the menu on the left. In the window that appears, you can enter search criteria.

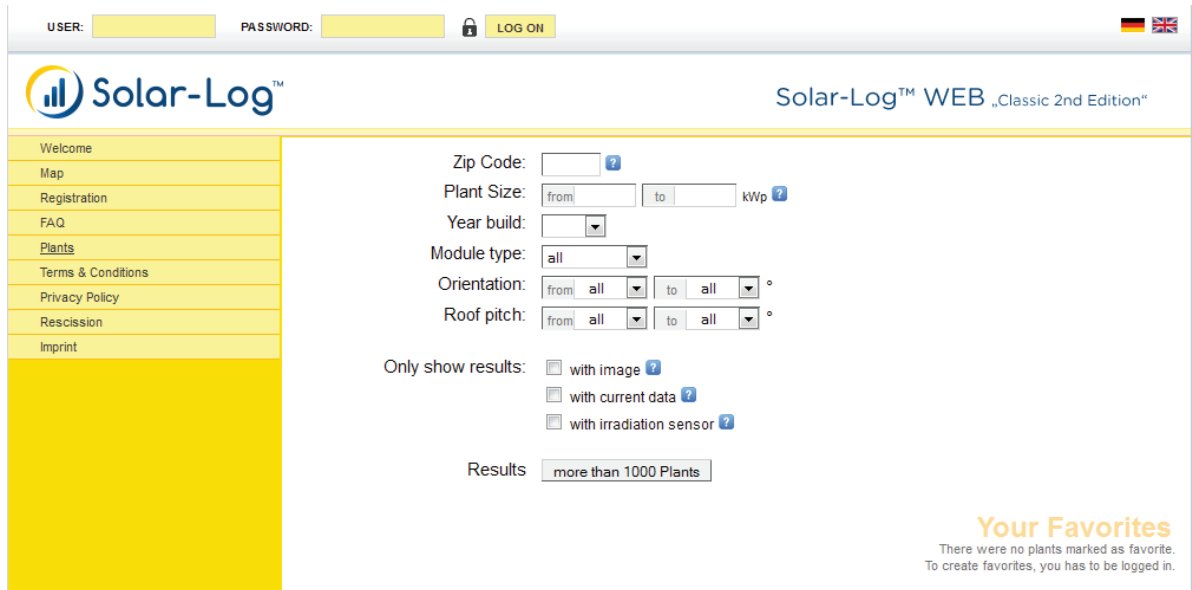


Fig.: C2 Plant search screen

Here you have the following search options:

- Zip code
- Plant size from to
- Production year
- Module type
- Orientation from to
- Roof pitch from to

With **Only results**, the results results can also be filter with the following criteria:

- with image
- with current data
- with irradiation sensor

The number of plants matching the search criteria is displayed in **Results**.

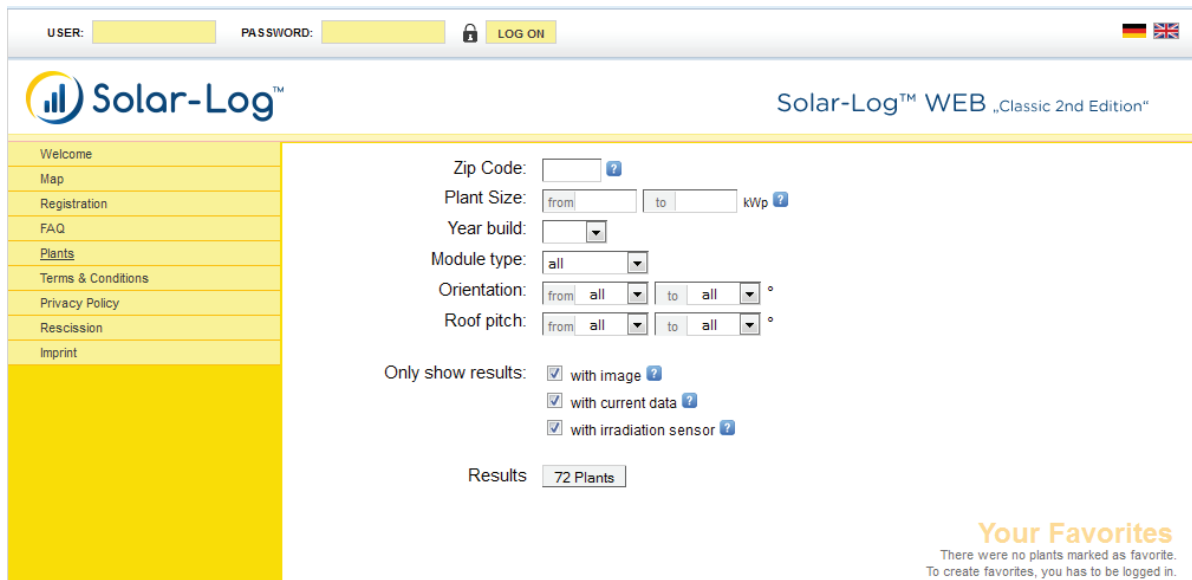


Fig.: C2 Plant search with a filter

The search results overview of the plants includes the number of installed inverters, their power output, orientation and roof pitch. A standard default image is used if there is no publicly viewable image available.



You can also find an overview of the current plant yields in the column on the right.

USER:  PASSWORD:  LOG ON


Solar-Log™ WEB „Classic 2nd Edition“

Welcome  
Map  
Registration  
FAQ  
**Plants**  
Terms & Conditions  
Privacy Policy  
Rescission  
Imprint

Your selection with image  with current data  with irradiation sensor   
[change filter](#)

Result 1 to 6 of 72, page 1 of 12  
◀ 1 2 3 4 5 6 7 8 9 10 11 12 ▶


**Rausiman**




DE - 49661 Cloppenburg  
DC 6.66 kWp  
KACO  
Aleo  
180° 48°  
2006

to plant view

Yesterday 1.44 kWh/kWp 9.57 kWh  
Today 17:45 1.01 kWh/kWp 6.72 kWh




**Hofer, Joachim**




DE - 08297 Zwönitz  
DC 10 kWp  
STECA  
Sunpower  
210° 42°  
2013

to plant view

Yesterday 1.75 kWh/kWp 17.51 kWh  
Today 17:35 1.05 kWh/kWp 10.53 kWh




**Babutzky, Simon**




DE - 73252 Lenningen  
DC 16.65 kWp  
KACO, M&T Sensorbox  
Top-Solar  
180° 20°  
2006

to plant view

Yesterday 0.57 kWh/kWp 9.53 kWh  
Today 17:50 1.45 kWh/kWp 24.19 kWh




**Jörg Karwath**




DE - 72336 Balingen  
DC 4.48 kWp  
SMA  
Sanyo  
150° 45°  
2005

to plant view

Yesterday 0.66 kWh/kWp 2.94 kWh  
Today 17:30 2.13 kWh/kWp 9.56 kWh



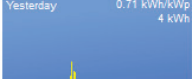
**Hommel, Michael**




DE - 73337 Bad Überkingen  
DC 5.6 kWp  
SMA  
alfasolar  
180° 30°  
2008

to plant view

Yesterday 0.71 kWh/kWp 4 kWh  
Today 17:45 1.75 kWh/kWp 9.80 kWh



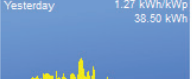
**Hannken, Jürgen**



DE - 27612 Loxstedt Fleest  
DC 30.24 kWp  
SMA  
ALEO  
135° 25°  
2010

to plant view

Yesterday 1.27 kWh/kWp 38.50 kWh  
Today 17:35 1.49 kWh/kWp 44.53 kWh



◀ 1 2 3 4 5 6 7 8 9 10 11 12 ▶  
Result 1 to 6 of 72, page 1 of 12

Fig.: C2 Plant search with results

Click on the [Plant](#) link above the day graph from today.

The graphic overview of the plant is displayed.

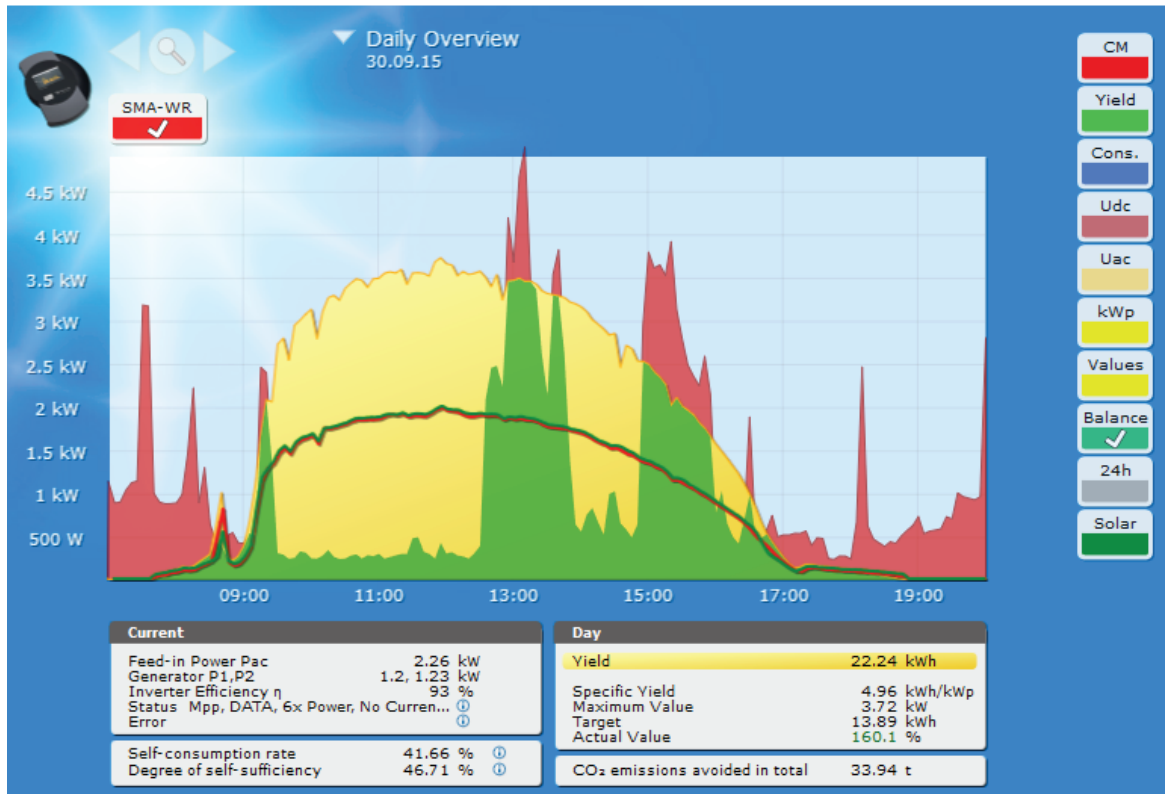


Fig.: C2 plant with a day curve

The graphic overview displays additional options that can be selected for your plant, such as current value, day yield and any fault notifications if present.

Create a bookmark in your browser for faster access to the plant details.

## 7.3 Accessing Yield Data

### 7.3.1 How to navigate between different overviews

How you navigate the website overviews corresponds to navigating the overview page from your local network.

#### Switching between overviews

Move your mouse to the inverted triangle on the left next to the displayed period.

An overview of the periods is displayed.



Fig.: C2 Navigating in the view

Click on the desired period.

The period overview is then displayed.

### 7.3.2 The meaning of the values in the overviews

The values displayed below the graph correspond to the values from the overview page from your local network.

Due to privacy concerns, the plant revenues are not displayed on the Internet site.

### 7.3.3 Daily Overview

Start your browser and click on the bookmark for your plant.

- You might have to log on.
- The plant details overview is then displayed.

Select Graphic from the menu on the left.

- The plant's daily overview is then displayed.

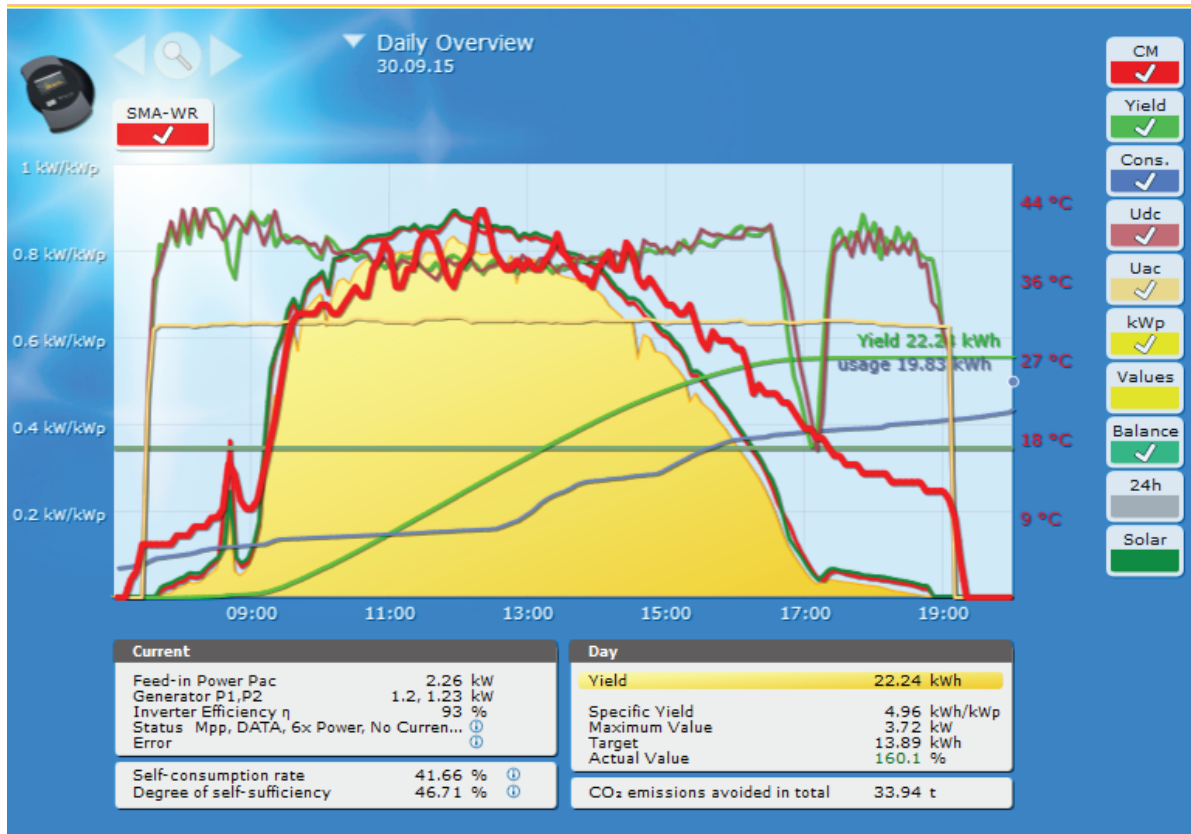


Fig.: Day curve with additional values

The daily yields are displayed as a curve graph. The dark green line indicates the daily target yield.

The different values throughout the day can be displayed by moving the mouse along the curve.

#### Daily Overview selection buttons

- Yield: Yield curve from which the yield performance can be observed. Additionally, the dark green line indicates the daily target yield total.
- DC voltage: Generator voltage; To view the voltage of individual strings, only one inverter can be selected.
- kWp: Switches the scale from "Output in watt" to "Output in kW/kWp." After that, all of the curves will be comparable in regard to their specific output. Diminishing module performance can also be recognized.
- 24h: This displays the output for every hour of the day in comparison to the consumption for the entire day.

#### Additional functions with SO power meters

The following displays are additionally available when an SO power meter is connected to the Solar-Log™.

- CM: This displays the power consumption of your building as a graphic in watts.
- Cons.: This displays the power consumption of your building as a curve in kWh.
- Values: This displays various values for your inverter as text.
- Balances: Displays the relation between your power consumption and yield In the box at bottom

on the left, the ration is also displayed as a percentage.

#### Additional functions with the Sensor Box

The following displays are additionally available when a Sensor Box is connected to the Solar-Log™.

- Solar: This displays the reference value from an Irradiation sensor. The plant's daily output has to lie within the range measured by the sensor.
- M °C: This displays the module temperature that is by measured by the Sensor Box.
- A °C: This displays the ambient temperature. This is measured by the ambient temperature sensor.
- Wind: This displays the wind speed and strength as measured by the wind sensor.

Click on the selection button and then on the magnifying glass icon.

- The selected curve is displayed.

### Explanation of current and daily data

Product label	Unit	Description
Feed performance Pac	W	The current fed power P on AC side.
Generator power P1, P2, P3	W	The current fed power P on DC side (= solar generator), per MPP-Tracker. When there are multiple inverters, this represents the total of the corresponding MPP trackers.
Inverter efficiency $\eta$	%	The current efficiency ‚Eta‘ taken from generator power and feed performance. The manufacturer's information regarding efficiency of the inverter can be controlled here.
Status / Error		Status code and depending on the inverter also an error code. The displayed codes are dependent on the manufacturer and need to be viewed in the manuals of the individual inverters. The same status messages are always grouped together. If all inverters are in the Mpp mode then „Mpp“ appears. If one of them for e.g. is in Derating mode, then this would look like: „2xMpp, 1xDerating“.
Self-consumption rate	%	Portion of self-consumption of solar energy to the total yield.
Degree of self-sufficiency	%	Portion of self-consumption of solar energy to the total power consumption.
Day yield	kWh	The day's total.
Day yield	Euro	The daily total is multiplied by the feed-in tariff.
Specific day Yield	kWhp	The day's total is divided by the plant size. This value is a good comparison value to other plants.
Maximum value	W	The maximum power value within one day.
Target	kWh	The Solar-Log™ uses a statistical forecast, that assigns to each month a specific target value. The month's target is set here as a daily target and displayed here. If the target value of the day's earnings is reached or exceeded, then the forecasted performance has been reached.
Actual	%	The actual percentage value shows the proportion between the day's actual yield and target yield.
CO <sub>2</sub> emissions avoided in total	t	CO <sub>2</sub> emissions avoided in total.

### 7.3.4 Monthly Overview

Select Monthly Overview from the navigation menu.

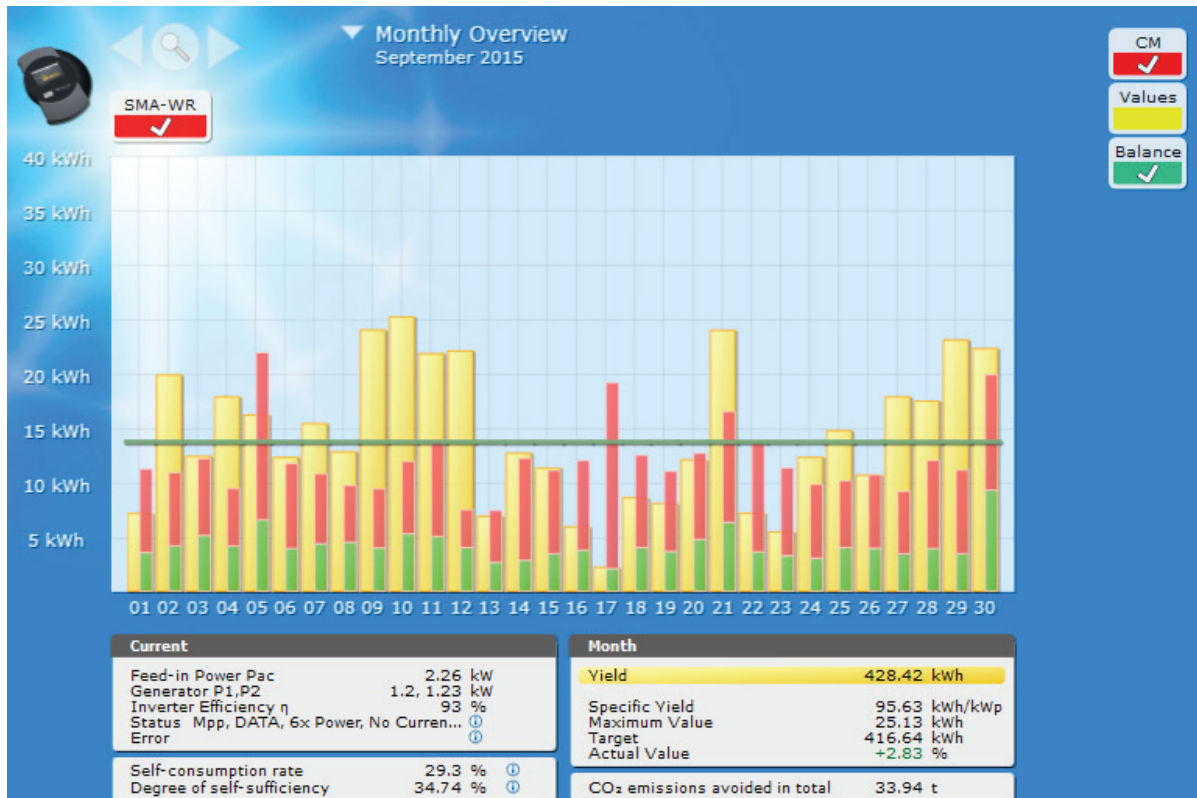


Fig.: Plant C2 - Monthly Overview

The daily yields from a month are displayed as a total in a bar graph. The dark green line indicates the month's target yield.

Move the mouse above one of the day bars.

- The yield from the selected day is displayed.

By clicking on a bar,

- the corresponding curve is displayed.

## 7.3.5 Annual Overview

Select Annual Overview from the navigation menu.

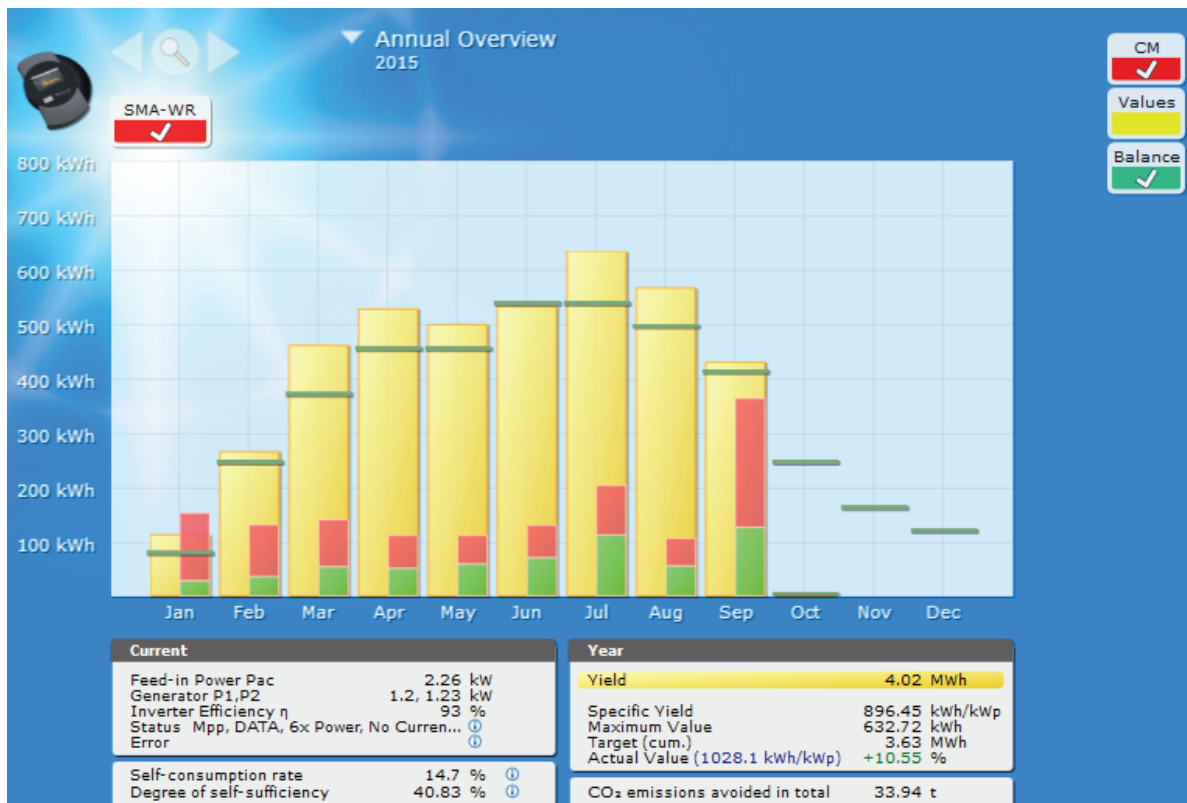


Fig.: Plant C2 - Annual Overview

The monthly yields from a year are displayed as a total in a bar graph. The dark green lines indicate the annual target yield.

The forecast value is calculated from the yields already achieved for the year and from the projected yields from the remaining months of the year.

Move the mouse above one of the month bars.

- The yield from the selected month is displayed.

By clicking on a bar,

- the corresponding monthly overview is displayed.

### 7.3.6 Total Overview

Select Overview of all Years from the navigation menu.

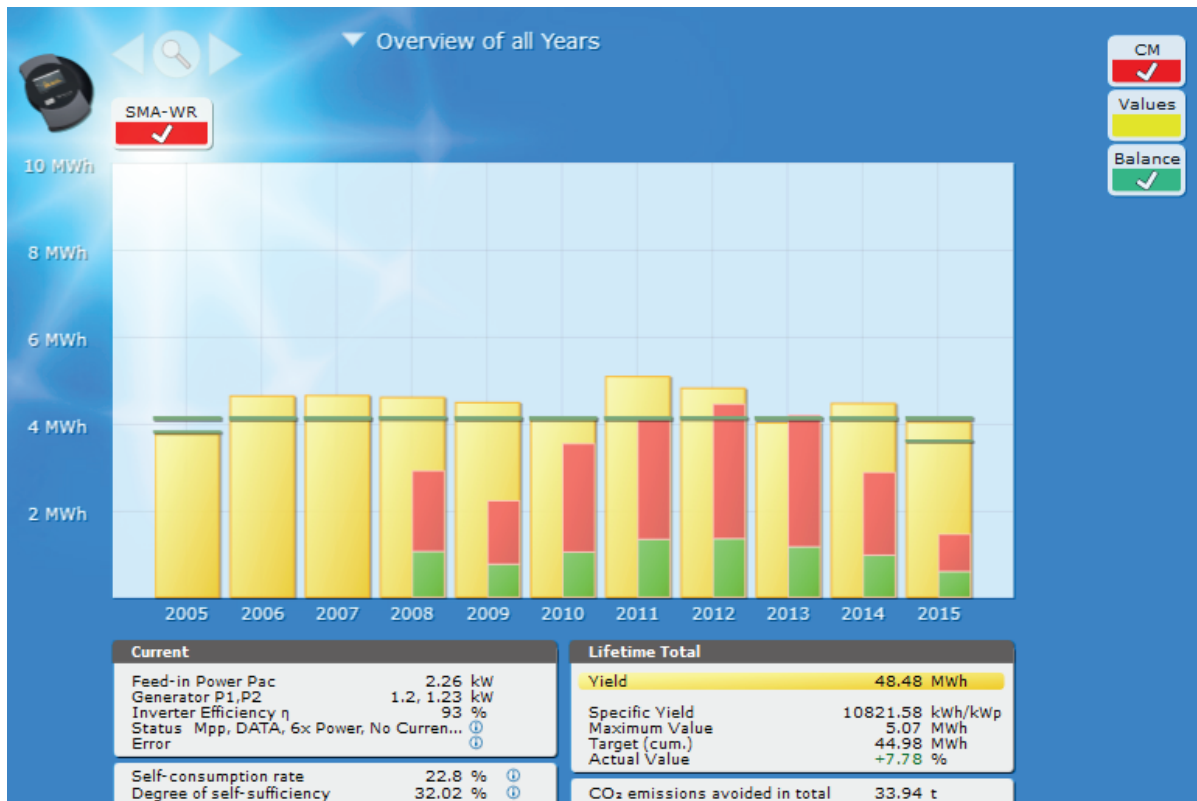


Fig.: Plant C2 - Total Overview

The individual annual yields are displayed as a total in a bar graph. The dark green line indicates the annual target yield. Two green lines are then displayed for the current year:

- The top line indicates the annual target.
- The bottom line indicates the accumulated annual yield compared to the annual target.

Move the mouse above one of the year bars.

- The yield from the selected year is displayed.

By clicking on a bar,

- the corresponding annual overview is displayed.

Click on Linear Overview Years:

- The total linear overview is then displayed.



### 7.3.7 Accessing and filtering the Event log

Select Events from the menu on the left.

- The complete list of all of the system events is displayed.

12.10.13 - 22.10.13			
Inverter	Events from - to	Status	Error
1	15.10.13 18:04 - 15.10.13 18:24	Offline	-
1	15.10.13 08:04 - 15.10.13 18:04	MPP	-
1	14.10.13 18:25 - 15.10.13 08:04	Offline	-
1	14.10.13 08:10 - 14.10.13 18:25	MPP	-
1	13.10.13 17:27 - 14.10.13 08:10	Offline	-
1	13.10.13 08:52 - 13.10.13 17:27	MPP	-
1	13.10.13 08:50 - 13.10.13 08:52	Offline	-
1	13.10.13 08:45 - 13.10.13 08:50	MPP	-
1	12.10.13 18:33 - 13.10.13 08:45	Offline	-
1	12.10.13 07:48 - 12.10.13 18:33	MPP	-
1	12.10.13 07:33 - 12.10.13 07:48	Offline	-
1	12.10.13 07:33 - 12.10.13 07:33	Startup	-
2	15.10.13 18:04 - 15.10.13 18:24	Offline	-
2	15.10.13 08:04 - 15.10.13 18:04	MPP	-
2	14.10.13 18:23 - 15.10.13 08:04	Offline	-
2	14.10.13 08:10 - 14.10.13 18:22	MPP	-
2	13.10.13 17:27 - 14.10.13 08:10	Offline	-
2	13.10.13 08:52 - 13.10.13 17:27	MPP	-
2	13.10.13 08:50 - 13.10.13 08:52	Offline	-
2	13.10.13 08:45 - 13.10.13 08:50	MPP	-
2	12.10.13 18:30 - 13.10.13 08:45	Offline	-
2	12.10.13 07:47 - 12.10.13 18:30	MPP	-
3	15.10.13 18:03 - 15.10.13 18:24	Offline	-
3	15.10.13 08:03 - 15.10.13 18:03	MPP	-
3	14.10.13 18:26 - 15.10.13 08:03	Offline	-
3	14.10.13 08:10 - 14.10.13 18:26	MPP	-
3	13.10.13 17:30 - 14.10.13 08:09	Offline	-
3	13.10.13 08:50 - 13.10.13 17:30	MPP	-
3	13.10.13 08:49 - 13.10.13 08:50	Offline	-
3	13.10.13 08:44 - 13.10.13 08:48	MPP	-
3	12.10.13 18:30 - 13.10.13 08:43	Offline	-
3	12.10.13 07:47 - 12.10.13 18:30	MPP	-
4	15.10.13 18:07 - 15.10.13 18:24	Offline	-
4	15.10.13 08:02 - 15.10.13 18:07	MPP	-
4	14.10.13 18:24 - 15.10.13 08:02	Offline	-
4	14.10.13 08:09 - 14.10.13 18:24	MPP	-
4	13.10.13 17:31 - 14.10.13 08:09	Offline	-
4	13.10.13 08:46 - 13.10.13 17:31	MPP	-
4	13.10.13 08:44 - 13.10.13 08:46	Offline	-
4	13.10.13 08:39 - 13.10.13 08:44	MPP	-
4	13.10.13 08:37 - 13.10.13 08:39	Offline	-
4	13.10.13 08:32 - 13.10.13 08:37	MPP	-
4	12.10.13 18:32 - 13.10.13 08:32	Offline	-
4	12.10.13 07:47 - 12.10.13 18:32	MPP	-

Fig.: Plant C2 - Notifications

Use the filter function to view a particular event or events from a particular day within the last 35 days.

	From - to	Status	Error
	15.10.13 08:07 - 15.10.13 18:24	Offline	-
4	15.10.13 08:02 - 15.10.13 18:07	MPP	-
4	14.10.13 18:24 - 15.10.13 08:02	Offline	-
4	14.10.13 08:09 - 14.10.13 18:24	MPP	-
4	13.10.13 17:31 - 14.10.13 08:09	Offline	-
4	13.10.13 08:46 - 13.10.13 17:31	MPP	-
4	13.10.13 08:44 - 13.10.13 08:46	Offline	-

Fig.: Plant C2 - Filtered notifications

1. Select the desired inverters from the "All inverters" drop-box.
  - Only the events from the selected inverters are displayed.
2. Limit your selection by selecting the desired day from the All Days drop-box.
  - Only the events from the selected day are displayed.
3. Limit your selection further by selecting the desired day from the All Days drop-box.
  - The status selection options available are only those that occurred during the selected time period.
4. Additionally, you can limit your selection further by selecting the type of fault from the All Faults drop-box.
  - The fault selection options available are only those that occurred during the selected time period.
5. Click on Clear Selection to reset all of the filter settings.

## 8 Cleaning and care

---

### 8.1 Cleaning tips

**Important!**



Be sure to unplug the device prior to cleaning it!

- Clean the device on the outside only with a dry, lint-free cloth.
- If the device is very dirty, it can be cleaned with a slightly damp cloth and a commercially available household cleaner.

**Important!**



When cleaning, make sure that no moisture gets into the device!

### 8.2 Care tips

- Make sure that the device is not exposed to any moisture at the location where it is kept.
- Make sure that the device is not exposed to any heat or strong sunlight at the location where it is stored.
- Please take note of the Technical Data.

## 9 Notifications on the LCD Status Display (Solar-Log 300, 1200 and 2000)

---

The Solar-Log 300, 1200 and 2000 have an LCD status display for notifications during installation and operation.

### 9.1 Meaning of the symbols on the LCD display

The following symbols are shown on the Solar-Log™ LCD display:

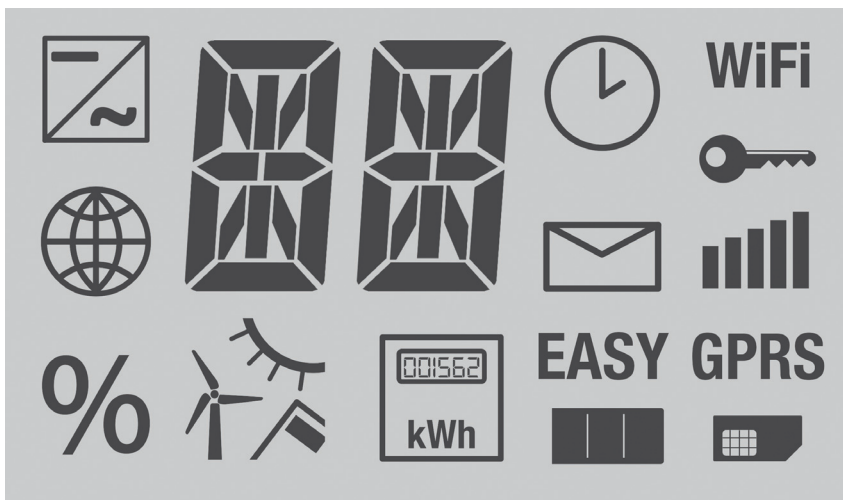













Fig.: LCD Status Display with all of the symbols

### Meaning of the symbols on the LCD display

Symbol	Meaning
	Inverters
	Internet or Network
	Firmware update progress
	Sensors for - Irradiation - Wind - Temperature
	Meter
	Booting progress
	SIM card
	Easy Installation active
	GPRS available
	Notifications from the Solar-Log™
	Signal strength in combination with GPRS, WiFi or Bluetooth



Encrypted WiFi connection



Wireless Internet



Time



Input box for fault codes

Note!



For detailed information on the LCD status codes, refer to the chapter "Notifications on the LCD Display, Error Messages and Faults" in the Installation Manual .

# 10 Faults (Solar-Log 200, 500 and 1000)

## 10.1 LED status display (Solar-Log 200, 500 and 1000)

On the front of the unit at the bottom left are four LEDs that show the operating status of the unit.

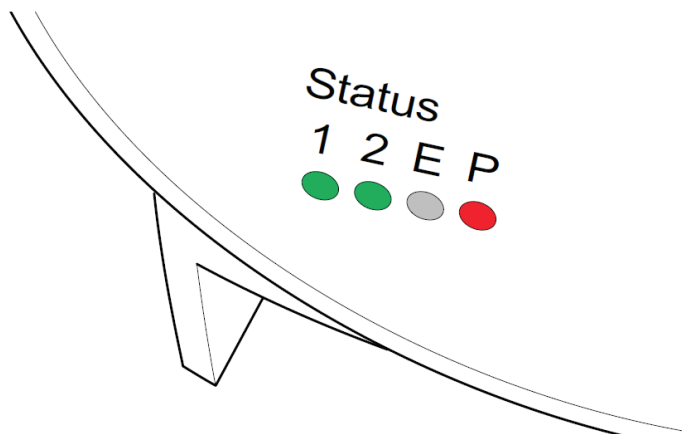


Fig.: Status LEDs

Depending on the operating status, LED 1, LED 2 and LED E may flash quickly or slowly, and may be lit steadily or switched off.

The red LED P indicates the presence of the power supply.

The LED E is not lit during normal fault-free operation. If lit or flashing, it indicates that a malfunction has occurred.

### Normal operation

LED 1	LED 2	LED E	LED P	Meaning
quickly	quickly	off		Max. 5 min.: Device starts
lit	slow	off		The time is synchronized via the Internet.
off	quickly	off		The configuration is being imported from the inverters.
lit	lit	off		Normal operation, inverter online
lit	off	off		Normal operation, inverter offline

Faults

LED 1	LED 2	LED E	LED P	Meaning and possible remedy
quickly	quickly	off		For 5 min. during initialization: Error! » Pull out power plug and plug in again.
lit	slow	slow		Failed to synchronize the time via the Internet. » Set the time manually. » Check Internet connection.
off	slow	slow		Configuration invalid or not readable: » Check interface. » Check cable. » Restarting.
		lit		Only with Fronius inverters: No data communication! » Wait for inverter feed-in » Check the wiring.
		quickly		Plant has reported a fault.
			slow	If the P LED is blinking, this indicates that the inverter is being controlled (power reduction) by the feed-in power management.

## 10.2 Troubleshooting faults oneself

You can remedy faults yourself by restarting the device. A restart is necessary if the device no longer reacts to entries in the web browser.

All settings made on the device remain in place, as well as all data collected during run-time.

To restart the device, use the reset button at the top of the device.

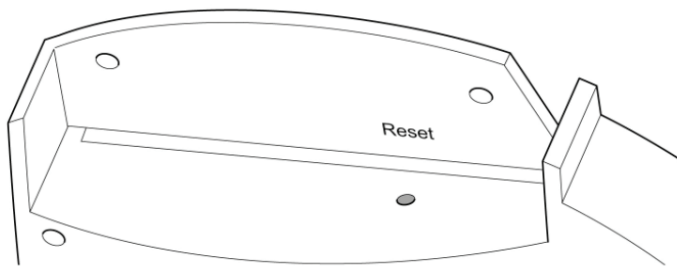


Fig.: Reset button on the top of the device

### Opening the cover

If the cover is on, you must first remove the cover from the device. If needed, you can also find the Solar-Log™'s serial number here.



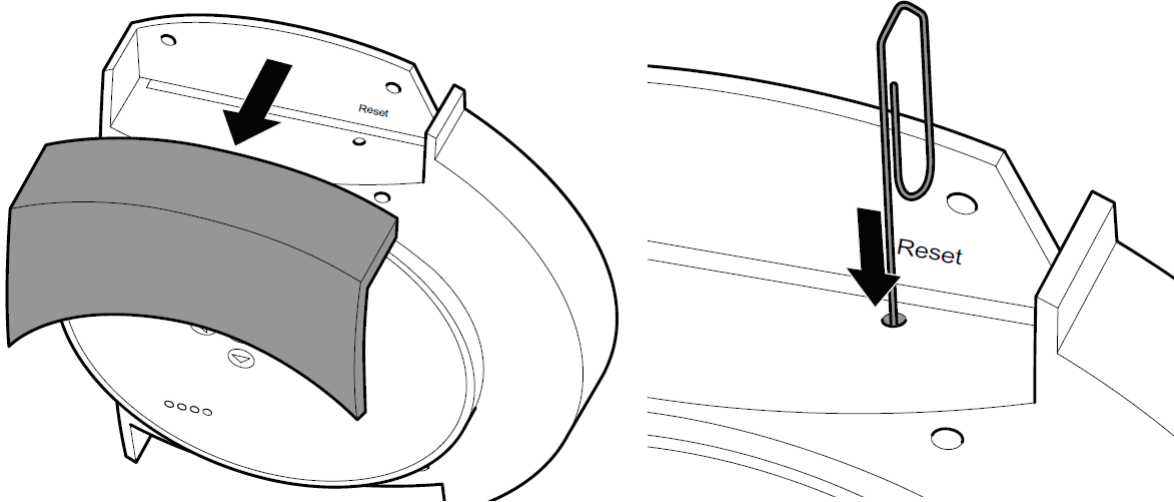


Fig.: Removing the cover from the Solar-Log™

Pull the cover forward to remove.

### Restarting

1. Press the reset button for a long period, e.g. with a straightened paper clip
  - LED:1, 2
2. Release the reset button.
  - After about 5 seconds, LED 1 is lit again.
3. Release the reset button.
  - Wait until normal operation has recommenced and then close the cover.

### Important!



Do not restart by pulling out the power plug!

## 10.3 Obtaining information from the Internet

You can also obtain support for operating the device or the settings on our Internet site under the following URL:

<http://www.solar-log.com/en/service-support/technical-support.html>

Here you will also find additional product information and manuals available for download.

## 10.4 Informing a specialist technician

If problems occur with the Solar-Log™ that are not able to be remedied using the measures described, we recommend that you contact your installer or our customer service.

# 11 Disposal

---

## Important!



Solar-Log™ contains electronic components that can release highly toxic substances if burned or disposed of along with domestic waste.

## Note!



Make sure you dispose of the Solar-Log™ as electronic scrap in the recycling center.

## 12 Technical Data (Solar-Log 300, 1200 and 2000)

Product comparison	Solar-Log 300	Solar-Log 1200	Solar-Log 2000	
Basic functions	PM+ <sup>(2)</sup>	●	●	●
	PM+ / WiFi <sup>(2)</sup>	●	●	-
	PM+ / GPRS <sup>(2)</sup>	●	●	● <sup>(4)</sup>
	Bluetooth (BT) <sup>(2)</sup>	●	●	-
	WiFi (Wireless Lan) <sup>(2)</sup>	●	●	-
	Bluetooth (BT) / WiFi <sup>(2)</sup>	●	●	-
	GPRS <sup>(2)</sup>	●	●	●
	Solar-Log™ Meter (CT)	●	●	-
	Central inverter SCB and SMB	-	-	●
	Communication interface	1 x RS485 / RS422 (one INV manufacturer per bus)	1 x RS485 1 x RS485 / RS422 (one INV manufacturer per bus)	1 x RS485, 2x RS485 / RS422, 1 x CAN (one INV manufacturer per bus)
Max. plant size	15 kWp / one INV manufacturer	100 kWp / two INV manufacturers	2000 kWp / three INV manufacturers	
Max. cable length	max. 1000 m <sup>1)</sup>	max. 1000 m <sup>1)</sup>	max. 1000 m <sup>1)</sup>	
Plant monitoring	String monitoring (depending on inverter type)	●	●	●
	Inverter failure, status of fault and power monitoring	●	●	●
	Sensor system connection (irradiation/ temp./ wind)	● <sup>3)</sup>	● <sup>3)</sup>	● <sup>3)</sup>
	E-mail and text message (SMS) Alarm	●	●	●
	Alarm (local)	-	-	●
	Yield forecast and degradation calculation	●	●	●
	Self-produced energy consumption: Digital electricity meter	●	●	●
	Self-produced energy consumption: Managing external appliances	●	●	●

Product comparison	Solar-Log 300	Solar-Log 1200	Solar-Log 2000	
Visualization	Integrated web server	●	●	●
	Graphic visualization – PC local and Internet	●	●	●
	LCD Status Display	●	●	●
	Display on the unit	-	4.3" TFT color display	4.3" TFT color display
	Controls on the device	-	via touch screen	via touch screen
	Large external display RS485 / S <sub>0</sub> pulse	●	●	●
Interfaces	Ethernet network	●	●	●
	USB flash drive	●	●	●
	Potential-free contact (relay)	-	●	●
	Alarm contact (anti-theft)	-	-	●
General Data	Power supply voltage/ device voltage/ power consumption	115 V – 230 V / 12 V / 3 W		
	Ambient temperature	-10 °C to +50 °C		
	Housing / dimensions (W x D x H) in cm / Mounting / protection level	Plastic/22.5 x 4 x 28.5/Wall-mounted/IP 20 (indoor use only)		
	Connection to Solar-Log™ WEB "Commercial Edition"	●	●	●
	Multi-lingual (DE, EN, ES, FR, IT, NL, DK)	●	●	●
	Memory, Micro SD card, 2 GB, endless data logging	●	●	●
	Warranty	5 years		

1) Depending on the inverter used and the cable length (details can also vary from one type of device to another).

2) Other important information about Bluetooth and compatibility, Power Management, self-consumption and SCB and SMB inverters can be found on our website [www.solar-log.com](http://www.solar-log.com).

3) Using every inverter on the same bus is not always possible, see the inverter database [www.solar-log.com](http://www.solar-log.com)

4) Solar-Log 2000 PM+ / GPRS interfaces: 1 x RS485, 1 x RS485 / RS422, 1 x CAN (1 INV manufacturer per bus).

Accessories

Solar-Log 300

Solar-Log 1200

Solar-Log  
2000

	Ready-to-install cable kits for most supported inverters		
	Digital electricity meter		
	PowerLine Package		
Accessories	RS485 Wireless Package		
	Sensors		
	Surge protection		
	Special PiggyBack RS485 (except TL-20 series)		
Accessories for SMA inverters	Data Module SMA RS485		

Top Features

Solar-Log 300

Solar-Log 1200

Solar-Log  
2000

LCD Status Display	Status display for installation and operations		
	Installation is possible without PC and installation expertise.		
Easy Installation	The inverter detection and Internet registration is enabled by default and is started automatically.	Inquiry for additional information, then automatic inverter detection and Internet registration.	-
Network recognition	Automatic search for the DHCP server and assignment of a valid IP address in the local network.		
Local network accessibility	Registration is done with its name. The IP address of the Solar-Log™ no longer needs to be known, unless there are several Solar-Logs on the network. The Solar-Log™ can be accessed directly from a web browser with this address: <a href="http://solar-log">http://solar-log</a> .		
Additional functions	Monitoring, optimization and managing of self-consumption with a fixed regulation of active power including the calculation of self-consumption.		
	Evaluation of Sensor Box Commercial data		
	-	-	Monitoring of central inverters
Solar-Log™ Meter	Monitoring, feed-in management and power meter.		
Support for the Solar-Log™ SCB/SMB	-	-	Individual string monitoring
Solar-Log™ PM+ functionality	Remote controlled active power reduction and reactive power adjustments		Monitoring large plants with support from the Solar-Log 2000 or Solar-Log 2000 PM+ with active power reduction and reactive power control along with response signals.

Article Number	Solar-Log 300	Solar-Log 1200	Solar-Log 2000
Standard	255574	255591	255592
BT	255577	255585	-
WiFi	255576	255584	-
BT / WiFi	255578	255586	-
PM+	255579	255587	255594
PM+ / WiFi	255580	255588	-
GPRS	255575	255583	255593
PM+ / GPRS	255581	255589	255595
Solar-Log™ Meter (CT)	255582	255590	-

Interfaces	Solar-Log 300	Solar-Log 1200	Solar-Log 2000	
RS485/RS422 - interface usage	RS485 / RS422 - combined interface usage	RS485 - interface, RS485 / RS422 - combined interface usage	RS485 A - interface, RS485 / RS422 B - / RS485 / RS422 C* - combined interface usage	
Inverter interface	Inverter connection			
	RS485 - interface usage	Connection of a Sensor Basic to record environmental data (irradiance and module sensor)	Connection of a Sensor Box Commercial to record environmental data (irradiance, module and ambient temperature, wind sensor)	
		Connection of meter for self-consumption according to IEC 60870		
		Connection of the display panels produced by Schneider Displaytechnik, Rico or HvG		
		-	-	Connecting the Utility Meter and I/O Box for PM remote control technology
	RS422 - interface usage	RS 422 Fronius / Sunville connectible without additional interface converters		
	CAN bus	-	-	For the connection of Voltwerk inverters
Additional function interfaces		S <sub>0</sub> pulse input - for optional recording and calculation of self-produced power consumption.		
	2x S <sub>0</sub> in / 1x S <sub>0</sub> out	Second Input to connect an additional power meter.		
		S <sub>0</sub> pulse output to connect large external displays, impulse factor can be set to any value.		
	Relay	-	Relay for external switch control, e.g. heat pumps	
	Alarm	-	-	Connection for anti-theft protection via contact loop for external alarms via potential-free contact
	USB connection	To access data		
		Import firmware updates at plants		
	PM+ interface (optional)	PM+ (Power Management)		
		For the connection of a ripple-control receiver to regulate the plant.		
		Fulfills the EEG 2012 requirements.		
Solar-Log™ Meter (optional)	Current measurements via transformers (extra accessory) up to 2 x 3 phases or 6 single phases.			



Interfaces

Solar-Log 300

Solar-Log 1200

Solar-Log  
2000

Net-  
work

---

Network Connection to the Internet (Ethernet, fixed IP address or DHCP)

.....  
GPRS (optional) Antenna connection and SIM card slot for Solar-Log™ with integrated GPRS.

---

\* not with GPRS models

## 13 Technical Data (Solar-Log 200, 500 and 1000)

Product comparison	Solar-Log <sup>200</sup>	Solar-Log <sup>500</sup>	Solar-Log <sup>1000</sup>
PM+ <sup>(2)</sup>	●	●	●
PM+ / WiFi <sup>(2)</sup>	●	●	●
PM+ / GPRS <sup>(2)</sup>	●	-	●
Bluetooth (BT) <sup>(2)</sup>	●	●	●
WiFi (Wireless Lan) <sup>(2)</sup>	●	●	●
Bluetooth (BT) / WiFi <sup>(2)</sup>	●	●	●
GPRS <sup>(2)</sup>	●	-	●
Central inverter SCB and SMB <sup>(2)</sup>	●	-	●
Max. number of inverters (depends on the INV manufacturer)	1/1 manufacturer	up to 10/1 manufacturer	up to 10/1 manufacturer
Communication interface	1 x RS485/RS422	1 x RS485 / RS422 (one INV manufacturer per bus)	1 x RS485, 2x RS485 / RS422, 1 x CAN (one INV manufacturer per bus)
recommended max. plant size	15 kWp	50 kWp	1 MWp
max. cable length	max. 1000 m <sup>1)</sup>	max. 1000 m <sup>1)</sup>	max. 1000 m <sup>1)</sup>
String monitoring (depending on type of inverter / tracker level)	●	●	●
Inverter failure, status of fault and power monitoring	●	●	●
Sensor system connection (irradiation/ temp./ wind)	● <sup>3)</sup>	● <sup>3)</sup>	●
E-mail and text message (SMS) Alarm	●	●	●
Local alarm (potential-free contact)	-	-	●
Yield forecast and degradation calculation	●	●	●
Self-produced energy consumption: Digital electricity meter	●	●	●
Self-produced energy consumption: Control of ext. consumer Appliance	-	-	●
Integrated web server	●	●	●

Graphic visualization – PC local and Internet	●	●	●
Graphic visualization – USB flash drive	-	-	●
LED – status display	●	●	●
Display on the device	-	2-line text display	full-graphic display
Controls on the device	-	Keypad	via touch screen
Large external display RS485 / S <sub>0</sub> pulse	-	●	●

Product comparison	Solar-Log <sup>200</sup>	Solar-Log <sup>500</sup>	Solar-Log <sup>1000</sup>
Ethernet network	●	●	●
USB flash drive	-	-	●
External Analog / GPRS (GSM) modem (RS232)	-	-	●
Potential-free contact (relay)	-	-	●
Alarm contact (anti-theft)	-	-	●
Power supply voltage/device voltage/ power consumption		115 V – 230 V / 12 V / 3 W	
Ambient temperature		-10 °C to +50 °C	
Housing / dimensions (W x D x H) in cm / Mounting / protection level		Plastic / 22.5 x 4 x 28.5 / Wall-mounted / IP 20 (indoor use only)	
Connection to Solar-Log™ WEB	●	●	●
Multi-lingual (DE, EN, ES, FR, IT, NL, DK)	●	●	●
Memory, Micro SD card, 2 GB, endless data logging	●	●	●
Warranty		5 years	

Interfaces

General Data

1) Depending on the inverter used and the cable length (details can also vary from one type of device to another).  
 2) Other important information about Bluetooth and compatibility, Power Management, self-consumption and SCB and SMB inverters can be found on our website [www.solar-log.com](http://www.solar-log.com).  
 3) Operation with RS422 inverter is not possible on the same bus.

Details	Solar-Log <sup>200</sup>	Solar-Log <sup>500</sup>	Solar-Log <sup>1000</sup>
Accessories	Ready-to-install cable kits for most supported inverters		
	Digital electricity meter		
	PowerLine Package		
	RS485 Wireless Package		
	Sensors		
	-	-	Mobile Service Package
	-	-	Modem Package
Accessories for SMA inverters	Surge protection		
	Special PiggyBack RS485 (except TL-20 series)		
	Data Module SMA RS485		

Top Features	Solar-Log <sup>200</sup>	Solar-Log <sup>500</sup>	Solar-Log <sup>1000</sup>
Compatibility	Compatible with all major inverters on the market, see <a href="http://www.solar-log.com">www.solar-log.com</a> for more details.		
Software	Web interface, no software installation required.		
Easy Installation	Installation is possible without PC and installation expertise.		
	The inverter detection and Internet registration is enabled by default and is started automatically.	Query for additional information, then automatic inverter detection and Internet registration.	
Network recognition	Automatic search for the DHCP server and assignment of a valid IP address on the local network.		
Local network accessibility	Registration is done with its name and the Solar-Log <sup>TM</sup> can be accessed directly from a web browser by entering <a href="http://solar-log">http://solar-log</a> in the address bar.		
	The IP address of the Solar-Log <sup>TM</sup> no longer needs to be known, unless there are several Solar-Logs in the network.		
Additional functions	Monitor and optimize the consumption of self-produced power		
	Evaluation of Sensor Box Commercial data		
	-	-	Monitoring of central inverters
Support for the Solar-Log <sup>TM</sup> SCB and Solar-Log <sup>TM</sup> SMB	Evaluation of Sensor Box data		
	-	-	Monitoring large plants with the support of the Solar-Log <sup>1000</sup> or Solar-Log <sup>1000</sup> PM+ with active power reduction.
	-	-	Solar-Log <sup>1000</sup> PM+ reactive power control.

# 14 List of figures

---

Fig.: Navigation designations.....	8
Fig.: Log in button with selection box.....	9
Fig.: Header bar with the "Hide Arrow".....	9
Fig.: Signal for new firmware.....	9
Fig.: Automatic Firmware Update Check with notification text displayed.....	10
Fig.: Window displayed indicating that a new firmware version is available.....	10
Fig.: Welcome screen.....	12
Fig.: VLCD Display.....	13
Fig.: The plant's current values (cockpit view).....	14
Fig.: Example of a plant with an energy flow.....	15
Fig.: Table with the recorded output from an example plant.....	16
Fig.: Graphic display of the plant's total production.....	17
Fig.: Daily View of the Production Graph with the Auto Scaling activated.....	18
Fig.: Day view of the production table.....	19
Fig.: Month view production graph.....	20
Fig.: Month view of the production table.....	21
Fig.: Year view graph.....	22
Fig.: Total view graph.....	23
Fig.: Graph of daily consumption with connected appliances in the sub-consumer view.....	27
Fig.: Graph of daily consumption with connected appliances and active line graphics in the sub-consumer view.....	28
Fig.: Day Balance graph with battery system.....	31
Fig.: Daily Balance Graph with the Auto Scaling activated.....	32
Fig.: Month view balance graph.....	33
Fig.: Year view balance graph.....	34
Fig.: Total balance graph.....	35
Fig.: Finances overview.....	36
Fig.: Graph of Sensor Box values.....	38
Fig.: System Information.....	39
Fig.: Inverter details graph.....	41
Fig.: Tracker comparison graph.....	42
Fig.: Module field comparison graph.....	43
Fig.: Battery diagnosis - Current measurement values.....	44
Fig.: Battery diagnosis - Charging History 1-Day.....	45
Fig.: LCD Display with the battery symbol and one element.....	47
Fig.: Battery diagnosis - Balance.....	48
Fig.: The event log is being loaded.....	49
Fig.: Event log.....	49
Fig.: Notification overview.....	50
Fig.: Message with text field.....	51
Fig.: Feed-In Management - Control State.....	52
Fig.: Feed-In Management - Feed-balance.....	58
Fig.: PM History.....	59
Fig.: Components - SO meter on interface A and B.....	61
Fig.: Alarm contact.....	62
Fig.: Connection test - Wireless Package.....	62
Fig.: Smart Energy Profile Configuration.....	64
Fig.: Status (current) example plant with values.....	66
Fig.: Example plant with an EGO Smart Heater and displayed values.....	68
Fig.: CSV Export.....	69
Fig.: Support - General.....	70
Fig.: Entering the recipient's e-mail address.....	71
Fig.: Defining Notification times and setting types.....	72
Fig.: Example of a yield message.....	73
Fig.: Yield overview (all INV) in HTML format.....	74
Fig.: Yield overview (all INV & groups) in HTML format.....	74
Fig.: Performance Monitoring: Example plant with two inverters.....	76
Fig.: Configuring module fields.....	77
Fig.: Configuring performance monitoring.....	77
Fig.: Performance Monitoring with notification and inverter.....	79
Fig.: Start page of the display.....	81
Fig.: Dashboard view.....	83
Fig.: Energy Balance view.....	83
Fig.: Forecast view.....	84
Fig.: Yield history - Day.....	85
Fig.: Environmental performance - Day view.....	86
Fig.: Menu Settings.....	87

Fig.: USB menu.....	87
Fig.: Inverter Event Log .....	100
Fig.: Inverter Event Log .....	100
Fig.: Alarm contact.....	101
Fig.: USB Backup Selection Menu.....	102
Fig.: Starting USB Backup .....	103
Fig.: Importing USB Configuration .....	103
Fig.: Importing USB Yield Data .....	104
Fig.: USB Firmware Update .....	105
Fig.: C2 registration.....	109
Fig.: C2 registration site.....	111
Fig.: C2 Plant search screen.....	112
Fig.: C2 Plant search with a filter.....	112
Fig.: C2 Plant search with results .....	113
Fig.: C2 plant with a day curve.....	114
Fig.: C2 Navigating in the view.....	115
Fig.: Day curve with additional values.....	116
Fig.: Plant C2 - Monthly Overview .....	118
Fig.: Plant C2 - Annual Overview .....	119
Fig.: Plant C2 - Total Overview .....	120
Fig.: Plant C2 - Notifications.....	121
Fig.: Plant C2 - Filtered notifications.....	122
Fig.: LCD Status Display with all of the symbols.....	124

Solare Datensysteme GmbH  
Fuhrmannstraße 9  
72351 Geislingen-Binsdorf  
Germany  
Tel: +49 7428 9418 200  
Fax: +49 7428 9418 280  
info@solar-log.com  
www.solar-log.com  
www.solarlog-WEB.com

The copyright of these instructions remains with the manufacturer. No part of these instructions may be reproduced in any form or processed, duplicated or distributed using electronic systems without the written consent of Solare Datensysteme GmbH. Subject to change without notice.

Solare Datensysteme GmbH cannot guarantee the accuracy or completeness of the information provided and expressly refuses to accept liability for any errors or omissions in such information. Non-compliance resulting in contradiction of the above-mentioned specifications shall result in obligation to provide compensation for damages. All brands and trademarks contained in this manual are the sole property of the respective manufacturer, which we respect and recognize herewith.