

Solar-Log™ WEB “Commercial Edition”
Product information

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1 Overview and Target Groups

Solar-Log™ WEB “Commercial Edition” is a professional platform for the efficient monitoring and administration of photovoltaic plants. The monitoring solution is aimed at installers and service providers who want to offer their customers professional plant monitoring as part of a service contract.

The software is based on a Content Management System (CMS) and allows you to design your own Solar-Log™ WEB Portal, according to your individual requirements. The page structure is flexible and can be filled as you want with a large number of available modules, without the need for any programming experience.

2 Page Design

The page structure of the Solar-Log™ WEB can be defined based on your own wishes. Menu construction, page design and access rights can be tailored simply and flexibly to meet your individual requirements.

A helpful Page Wizard facilitates the quick creation of complete page structures at the press of a button. These page structures can be made using templates you create yourself or by selecting from various standard templates. Page management copy and sort functions are further useful tools to aid efficient page handling. If required, a user-defined page structure can be created automatically when setting up a new plant in the Solar-Log™ WEB.

Various modules that can be placed on the pages are available for designing the Solar-Log™ WEB user interface experience. Monitoring and displaying modules can be enhanced with text or image elements. By adding your own company logo and a background colour of your choice, the appearance of the Solar-Log™ WEB pages can be modified to match any corporate design.



Fig.: Page View



Fig.: Page Wizard

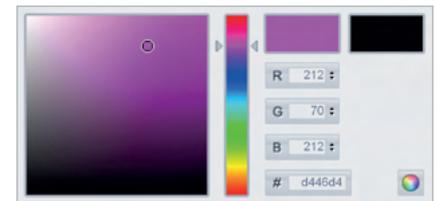


Fig.: Colour selection

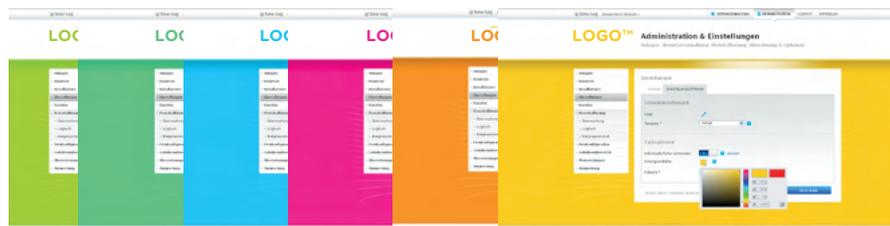


Abb.: Template in different sample colours

3 Plant Monitoring

Various tools for professional plant monitoring and fault analysis are available in the Solar-Log™ WEB Administration section, which can only be accessed by users with the corresponding rights.

3.1 Plant Monitoring

All plants, along with their current status, are displayed in the main Plant Monitoring so that at a glance you can see which plant or plant groups are reporting faults and which are operating fault-free. Error messages from the inverter, inverter failures and power deviations are reported in the Plant Monitoring. Also, Internet connection faults are reported. In addition, changes to the power limits are displayed in the Power Management category.

Plant Name	Serial Number	Performance
> Solar-Log™ 01	16227796	2
> Solar-Log™ 02	3334747	4
> Solar-Log™ 03	1634893	4

Fig.: Error message in the plant monitoring

3.2 Event Log

The inverter event records from all plants are found in the Event Log. These are the original status messages that are sent directly from the inverters. The scope of the displayed data can be limited by the application of filters, and the data can be exported as a CSV file.

Inverter	Date	Status	Error
1	05.09.2012 03:03 - 05.09.2012 10:10	Power	
1	05.09.2012 03:02 - 05.09.2012 03:03	offline	
1	04.09.2012 16:33 - 05.09.2012 03:02	Power	
1	04.09.2012 16:32 - 04.09.2012 16:33	offline	
1	04.09.2012 16:30 - 04.09.2012 16:32	Power	
1	04.09.2012 16:28 - 04.09.2012 16:30	offline	
1	04.09.2012 16:21 - 04.09.2012 16:28	Power	
1	04.09.2012 16:19 - 04.09.2012 16:21	offline	
1	04.09.2012 16:16 - 04.09.2012 16:19	Power	
1	04.09.2012 16:15 - 04.09.2012 16:16	offline	
1	04.09.2012 16:12 - 04.09.2012 16:15	Power	

Fig.: Event log from a plant

3.3 Remote Configuration

Each connected Solar-Log™ can be configured online using the Remote Configuration function in the Solar-Log™ WEB “Commercial Edition”. This online configuration option reduces the on-site setup work to a minimum. Changes to the configuration can also be made simply and quickly from your office at any time.

Fig.: Remote Configuration

3.4 Plant Logbook

With the Plant Logbook, Solar-Log™ WEB “Commercial Edition” offers an integrated ticketing system, giving you a tool to document and administer failures, service call-outs and activities at the photovoltaic plants. If required, the error messages shown in the Plant Monitoring can be transferred directly to the Logbook.

Thanks to the recording of priority settings, processing statuses and completion dates, the management of the logbook entries is completely transparent. Each entry can be assigned to a staff member and can be forwarded directly to several recipients via e-mail, including the option of adding a comment.

The Report function in the Plant logbook facilitates the creation of a user-defined logbook report. This can be used for internal organisational purposes or it can be made available to the plant owner as documentation of errors and service call-outs.

Fig.: Logbook with status categories

4 Plant Representation

Using various modules, the pages of your own Solar-Log™ WEB platform can be designed individually. In this way, the monitored plants can be presented based on your own needs and requirements.

4.1 Solar-Log™ WEB Graphic

In the Solar-Log™ WEB Graphic, a core part of the plant monitoring and presentation, the yields from the photovoltaic plants are shown as a graphic. In viewing mode, the graphic can be switched between the day, month and year view. Individual inverters, consumption metres and weather sensors as well as values such as voltage or specific yield can be shown or hidden using various buttons. The Value view also presents the yields in a tabular form if required and facilitates the export of the data in a CSV or text format.



Fig.: Graphic in the day view

The graphic can be individually designed through the use of a user-defined background picture. Up to ten Solar-Logs can be brought together in one graphic.

4.2 Dashboard

All of your plant data is always up-to-date and clearly presented with the Dashboard. The module can be integrated into web pages or opened directly in full-screen mode. Six different elements can be displayed in the Dashboard: **Current Production**, **Weather**, **Yield History**, **Environmental Contribution**, **Earnings** and **Plant Information**. Up to four elements can be displayed at the same time.



Fig.: Dashboard in full-screen mode

4.3 Data Sheet

A plant's Data Sheet gives the visitor to the site an overview of the plant data such as the installation date and the inverter or module manufacturer. This information can be extended by the addition of location data, owner information or a photograph of the plant.

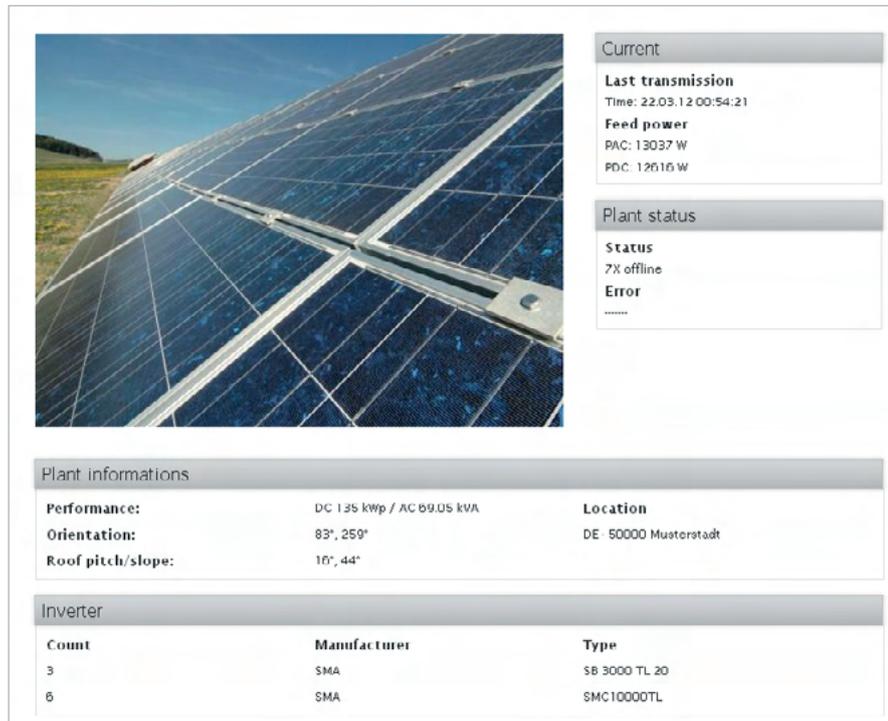


Fig.: Data sheet with plant photograph

4.4 Value Overviews

The accumulated yields of several Solar-Logs can be presented in a clear form using the Value overview. As well as the yields from various time periods (current day, current month or current year), the total of the CO₂ emissions that have been avoided and the install power can also be displayed. You can select all or just some of the Solar-Logs that are active in the Solar-Log™ WEB as the basis for the calculation.

The values can be displayed in a standardised form, with a background picture of your choosing or can be inserted into a customised text as placeholders. No limits are set on the creativity you can employ when presenting the data.



Fig.: Value overview with background picture

4.5 Map

All plant locations can be shown on a map. In this way, the page visitor can get an impression of the geographic distribution of the plants that are being monitored. You can choose to show the map in the map or satellite view. The most important information about a plant can be shown by clicking on a map pin.

4.6 Contact Form

The portal operator can give visitors to the site the option to get in contact quickly and easily using the Contact Form. The fields and the field names on the Contact Form can be defined as you want.

The contact form contains the following elements:

- A single-line input field for "Your e-mail address *".
- A multi-line input field for "Your message *".
- A checkbox labeled "Monthly newsletter".
- A blue button labeled "SEND E-MAIL NOW".
- A note at the bottom: "Note: All boxes marked with an * are required."

Fig.: Contact form with single and multi-line input fields, checkbox and submit button

4.7 Plant Overview

The Plant Overview offers a view over several plants that are being monitored in the Solar-Log™ WEB. As well as the most important plant data, the overview also delivers a thumbnail representation of the current yield graphic and a photograph of the plant. Using the filter function, the plants displayed can be limited by the year of installation or the inverter or module manufacturer. You can switch from the Plant Overview directly to the data sheet or the graphic of a specific plant.

	Location DE - 72336 Balingen Plant Power AC 4.1 kVA / DC 4.48 kWp Inverter S0Input, SMA, SensorBox, SensorBox L Modules Sanyo, Sharp Built in 2012 Orientation ° 0, 150 Roof Pitch ° 0, 45	Yesterday's Yield : 2.07 kWh/kWp Go to the plant page
	Location DE - 72051 Dinsdorf Plant Power AC 10.5 kVA / DC 7.7 kWp Inverter SMA Modules Day4Energy Built in 2012 Orientation ° 0, 280 Roof Pitch ° 0, 37	Yesterday's Yield : 1.09 kWh/kWp Go to the plant page

Fig.: Plant Overview

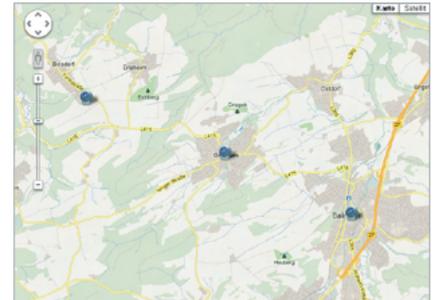


Fig.: Map view

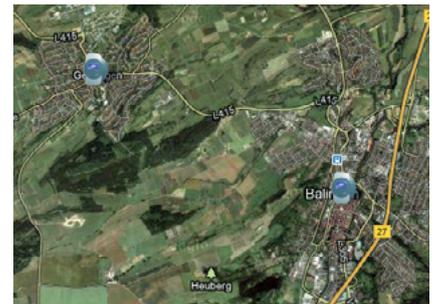


Fig.: Satellite view

4.8 Performance Ratio Graphic

The Performance Ratio (PR) graphic displays a plant's performance ratio value graphically or as a table. A pre-requirement is that an irradiation sensor is connected. Based on the sensor data, the theoretically possible yield (100%), under the given weather conditions, is displayed opposite the actual feed-in power.

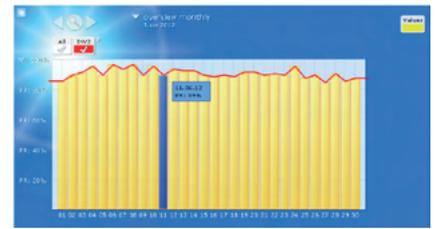


Fig.: Performance Ratio graphic in the month view

4.9 Texts, Images & HTML

All Solar-Log™ WEB pages can be enhanced by the addition of any texts or images of your choosing. The HTML module offers further design options to any experienced HTML programmer. Using HTML code, the actual monitoring platform can be customised with individually programmed pages.

4.10 String Connection Box Graphic

The String Connection Box (SCB) graphic visualises a plant's SCB data. The ampere values of individual strings can be compared with each other and errors or differences can be clearly identified through the colour coding.

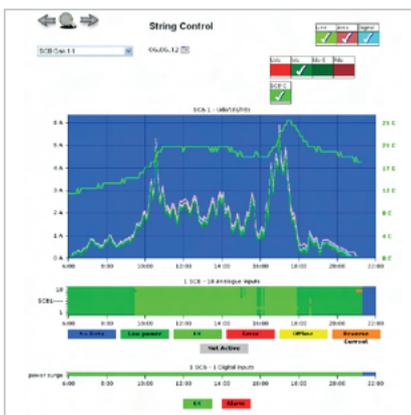


Fig.: String Connection Box graphic

5 Administration

As well as the tools for professional plant monitoring, the Solar-Log™ WEB Administration section also offers functions for the easy management of plants, users and files. A large number of report options are also available.

5.1 Plant Management

All the data relating to all the plants that are set up in the portal can be found in the main Plant Management. Plants can be grouped together so that administration is clear and structured, even if there are a large number of plants. A plant assistant offers a choice of various setup types so that setting up new plants in the Solar-Log™ WEB can be done easily and quickly.

All the information about a plant can be found in different tabs: basic information such as location and the owner's contact data, plant-specific documents such as string and roof utilisation plans, as well as details about the individual inverters. Various access data can also be found here, such as the plant-specific FTP account or the password for using the iPhone app.

5.2 User Management

Access data for new Solar-Log™ WEB users can be created in the User management and existing access rights can be edited. A user's individual access rights enable the display of pages that are not visible to other page visitors or access to the administration and page editing area of the portal. The management of user profiles is clearly laid out thanks to the use of freely definable User Groups.

5.3 Document Management

Different types of documents, e.g. JPEG, PDF, XLS, can be uploaded to the Solar-Log™ WEB File system and stored in their own folder structure. In this way, the required documents or images can be accessed over the Internet at any time. Also, all the images, photographs or background graphics are found here as well.



Fig.: Administration

5.4 Reporting Options

Different reports can be created for all the plants integrated in the Solar-Log™ WEB, which can be adapted to meet individual requirements. So as well as yield overviews and inverter comparisons it is also possible to create Power Management reports, Logbook reports, Self-produced Power Consumption Reports or overviews containing general plant information. Depending on the report category, various options and file formats are available (CSV, PDF).

If required, the automated reporting function makes it possible to produce regularly recurring reports, which can be sent automatically to selected e-mail recipients or to an FTP account.

Plant report

Location: Fuldastr. 9, DE 72131 Gersingen-Brudorf
Owner: Solar-Log Systeme GmbH, Fuldastr. 9, DE 72131 Gersingen-Brudorf

Plant performance: DC: 1.9 kWh AC: 10.03 kWh

Map: DN: 123456789

Period: 2012-04-01 - 2012-04-05

Date	Yield total	Yield expected	Yield specific	Yield in €	Target in €	Difference Yield/Target
2012-04-01	274.28 kWh	440.10 kWh	0.6 kWh/kWhp	170.02 €	205.94 €	-35.92 %
2012-04-02	341.81 kWh	440.10 kWh	0.8 kWh/kWhp	196.70 €	205.94 €	-25.48 %
2012-04-03	230.27 kWh	440.10 kWh	0.5 kWh/kWhp	106.50 €	205.94 €	-47.83 %
2012-04-04	280.17 kWh	440.10 kWh	0.6 kWh/kWhp	142.58 €	205.94 €	-30.73 %
2012-04-05	43.94 kWh	440.10 kWh	0.1 kWh/kWhp	20.50 €	205.94 €	-90.32 %
2012-04-06	82.95 kWh	440.10 kWh	0.2 kWh/kWhp	38.76 €	205.94 €	-81.13 %
2012-04-07	114.75 kWh	440.10 kWh	0.3 kWh/kWhp	51.70 €	205.94 €	-74.86 %
2012-04-08	214.28 kWh	440.10 kWh	0.5 kWh/kWhp	102.00 €	205.94 €	-50.45 %
2012-04-09	340.10 kWh	440.10 kWh	0.8 kWh/kWhp	170.00 €	205.94 €	-16.44 %
2012-04-10	380.65 kWh	440.10 kWh	0.9 kWh/kWhp	181.88 €	205.94 €	-11.64 %
2012-04-11	314.78 kWh	440.10 kWh	0.7 kWh/kWhp	153.00 €	205.94 €	-26.22 %
2012-04-12	288.22 kWh	440.10 kWh	0.7 kWh/kWhp	154.74 €	205.94 €	-24.88 %
2012-04-13	222.65 kWh	440.10 kWh	0.5 kWh/kWhp	103.70 €	205.94 €	-49.63 %
2012-04-14	351.88 kWh	440.10 kWh	0.8 kWh/kWhp	169.00 €	205.94 €	-17.43 %
2012-04-15	71.75 kWh	440.10 kWh	0.2 kWh/kWhp	33.02 €	205.94 €	-83.92 %
	3.113 kWh	3.785 kWh	0.8 kWh/kWhp	1.548.124 €	3.229.211 €	W -51.38 %

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Fig.: Yield report in PDF format

5.5 Tariff Overview

The Tariff Overview offers the portal provider a listing of all the plants in the Solar-Log™ WEB that are active and are billable. At the start of each month, a list is produced of those plants whose annual charge is due that month. The Tariff Overview can be downloaded as a PDF or a CSV file.

The plant annual charges are calculated based on the current price list.

Initially, Solar-Log™ WEB can be tested free-of-charge for 30 days for each plant. Following this, the annual charge will be billed in advance for the next 12 months.

6 Additional Services

6.1 Corporate Identity Template*

The default design of the Solar-Log™ WEB pages can be customised by using your own logo and a background colour of your own choosing. In addition, the template can be modified to match the design of an existing company website, on request. (This is done as a chargeable additional service by Solare Datensysteme GmbH.)

* Additional services and training costs are calculated based on the current price list.

6.2 Domain*

Each Solar-Log™ WEB platform operator is assigned their own sub-domain (operatorname.solarlog-web.com). Alternatively, there is an option to register a domain of your choice, through which the Solar-Log™ WEB can be reached.

6.3 Solar-Log™ WEB Training*

In order to be able to get the best possible benefit from the many functions and options available in the Solar-Log™ WEB, there is an initial half-day training course, where you will receive a detailed introduction and where specific circumstances can be addressed.

(We recommend attendance at an Installation seminar to start, where you learn about both the technical background to the Solar-Log™ WEB and the essential Solar-Log™ configuration options.)

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