



# Solar-Log 1900

# For Large-Scale PV Plants and Solar Power Stations

# **Functions**

## Feed-In Management

The Solar-Log 1900 is equipped with all of the functions needed for feed-in management. This includes solutions for active and reactive power control as well as response signals for the grid control center.

#### Self-Consumption

The Solar-Log 1900 offers the option to measure the amount of self-produced power consumed and to present it graphically via the Solar-Log WEB Enerest<sup>™</sup>. An additional power meter serves as a consumption meter.

## Solar-Log 1900 Alarm Function

The external alarm can be used to provide anti-theft protection to protect the system from burglars.

## **Direct Marketing**

In Germany since 01 January 2016, PV plants with an installed output of more than 100 kWp are required to participate in direct marketing. Solare Datensysteme GmbH offers the Solar-Log 1900 as technical solution for all direct marketers.

## Licenses

Detailed information on the direct marketing and feed-in management licenses, FTP and SCB licenses as well as the advanced options of the Solar-Log<sup>™</sup> are described on page 100 and 101 in our portfolio.

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# Options

## Solar-Log 1900 PM+ & Solar-Log<sup>™</sup> Utility Meter

Combining the Solar-Log 1900 and Utility Meter simplifies implementation of the diverse requirements for powermanagement in Germany. The voltage-dependent reactive power control, Q(U) function, is accomplished by measuring the medium voltage with the Utility Meter. The combination of the Solar-Log 1900 and Utility Meter is also needed to send a confirmation of the current amount of feed-in power to the grid operator.

## Solar-Log 1900 & PM-Package

For plants larger than 100 kWp, remote control of the reactive power supply and power limitations are required along with a confirmation of the current amount of feed-in power. In practice, each grid operator stipulates its own signalization variant in the technical connection requirements (TAB). To fulfill the requirements from a particular grid operator, Solare Datensysteme offers a grid company specific PM-Package. This package includes hardware that is adjusted to a company's remote control technology and profile file.

#### String Connection Box (SCB)

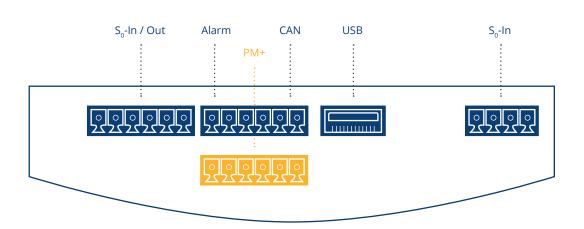
When used with the Solar-Log WEB Enerest<sup>™</sup> XL and either the SCB, the Solar-Log 1900 monitors every single string, ensuring the most complete and secure monitoring for large-scale PV plants with exact error identification and localization.



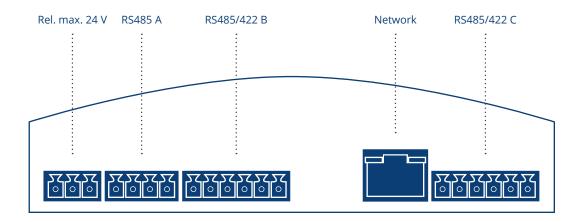
Feed-in management - feed balance: The times when there was a grid feed and when electricity was purchased from the grid can be seen at a glance in this graph. Negative (red) values indicate that electricity was purchased from the grid and positive (yellow) values that there was grid feed.

# Solar-Log 1900 PM+

# Interfaces



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## Inverters

A maximum of 100 inverters (just one manufacturer per bus), maximum plant size 2000 kWp.

## Interfaces

The interfaces can be used to connect inverters and components such as the Utility Meter, Pyranometer and SCBs. The Solar-Log 1900 Standard and Solar-Log 1900 PM+ have two RS485/RS422 interfaces and one RS485 interface.

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# Solar-Log 300, 1200, 1900 and 2000

## **Common Features**

# **Functions**

## LCD-Status-Display

Status display for installation and operations.

## Smart Energy

Recording and presentation of self-consumption control and visualization of individual appliances for the optimization of self-consumption.

#### Feed-in Management

Reduction of feed-in power with a dynamic allowance for self-consumption.

# **Display Options**

#### Solar-Log WEB Enerest™

The Solar-Log WEB Enerest<sup>™</sup> online portal expands the presentation and monitoring functions of the Solar-Log<sup>™</sup> and offers comprehensive reporting options in the form of graphs and tables.

## The App for Solar-Log WEB Enerest™

This app offers users comfort and security with its structured operating concept, intuitive controls, modern features and interactive graphics. The app is available for free from the app store.

#### Solar-Log<sup>™</sup> Dashboard

The Dashboard is a feature of the Solar-Log WEB Enerest<sup>M</sup> L and XL that displays all important information for a plant such as yields, CO<sub>2</sub> savings and plant performance.

## Solarfox® Large and External Display

A large external display used in combination with the Solar-Log<sup>M</sup> can visually present live data from a PV plant. You can also add personalized advertisements. Large external displays can be connected via the RS485 or S<sub>0</sub> interface.

# Connections

#### Inverters

The Solar-Log<sup>™</sup> is compatible with inverters from all major manufacturers.

#### Sensors RS485

The sensors measure solar irradiation, temperature and wind speed. They can even be combined with some inverters on an RS485 bus.

## Meter S<sub>o</sub>-In or RS485

The meter can record your consumption data or serve as an inverter and measure the power from incompatible inverters. In addition, batteries can be visualized via meters.

#### RS485 or S<sub>o</sub>-Out

Connect a large external display to gain an additional overview of the data.

## Solar-Log<sup>™</sup> USB Connection and Data Export

A USB stick can be connected for safe and quick manual installations of new firmware updates, configurations, and backups. The backup and configuration can be exported as a file via USB.

#### **Ripple Control Receiver**

The signal to reduce active power is generally sent via a Ripple Control Receiver or remote control technology. Up to two Ripple Control Receivers can be connected to the Solar-Log<sup>™</sup> PM+, one for power reduction and one for reactive power control.

## Ethernet / Speedwire\*

The Solar-Log<sup>™</sup> models can be connected to compatible inverters with an Ethernet connection. SMA inverters can be connected directly to a regular network infrastructure with SMA's own Speedwire protocol. The SMA inverter only has to be connected to an Ethernet switch or router.

# **Additional Functions**

#### Protection for the Interfaces and Cables

The cable cover for the Solar-Log<sup>™</sup> offers the best possible mechanical protection for interfaces and cables as well as an attractive design.

#### **Data Security**

The data volume from the Solar-Log<sup>™</sup> can be recorded. The micro SD card is used to protect against any loss of data in the event of a power failure.

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\*In many countries, the designation "Speedwire" is a registered trademark of SMA Solar Technology AG.