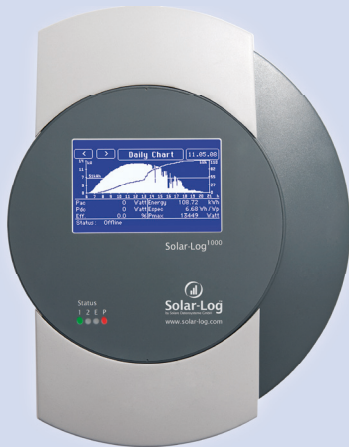# Solar-Log™ Hardware

Solar-Log¹⁰⁰⁰, the professional monitoring system at its best

Suitable for connection:

1-100

Display:

Optionally available with:

GPRS   PM+   WiFi

The Solar-Log¹⁰⁰⁰ is operated intuitively either via the sensitive touch screen or via a PC with a popular web browser. The installation of software is not required. The graphic and tabular evaluations can be accessed at any time locally or via the Internet.

⭐ **Suitable for plants with up to 100 inverters and optional Powermanagement and cos φ control**

⭐ **Suitable for string monitoring in combination with central inverter**

⭐ **Recommended: max. plant size 1 MWp / Solar-Log¹⁰⁰⁰**

⭐ **Monitoring and control of the consumption of self-produced energy**

⭐ **Optional: wireless connection via GPRS, WiFi and / or Bluetooth**

Simple installation and connection

- **Solar-Log™ Easy Installation**
  The installation and initial operation of the data logger is quick and simple with "Easy Installation". The search for inverters and Internet log-on takes places immediately and automatically.

- **Cable cover**
  With its attractive design the cable cover for the Solar-Log™ offers the best possible mechanical protection for interfaces and cables.

Solar-Log™ WEB

The Solar-Log™ WEB online portal expands the monitoring function of the Solar-Log™ and offers comprehensive evaluation programs concerning the monitoring of PV plants.

- **Solar-Log™ WEB "Commercial Edition"**
  Solar-Log™ WEB "Commercial Edition" allows the plant operator to offer an expanded and professional plant monitoring service in the framework of a "Full Service" maintenance agreement.

| Number of inverters | Sensors | Meter S₀ | Solarfox / Large display | Ripple control receiver |

Solar-Log™ added functions

- **Solar-Log¹⁰⁰⁰ PM+**
  The new EEG 2012 (Germany) places special demands on new and existing plants: PV plants must engage in feed-in management and network safety management in order to prevent an overload of the distribution network. The PM+ product line covers the entire spectrum of requirements with regard to active and reactive power.

- **Solar-Log¹⁰⁰⁰ PM+ & Solar-Log™ Utility Meter**
  The combination of the Solar-Log¹⁰⁰⁰ PM+ and Solar-Log™ Utility Meter makes it possible to regulate the feed-in reactive power according to the voltage prevailing on the medium voltage level. The crucial point is that the PV plants are able to be controlled in accordance with the specifications of the particular network operator with respect to feed-in active power, and reactive power is made available. With the aid of the Utility Meter which is specially designed for the medium voltage directive, the variable provision of reactive power can be realized.

- **Solar-Log¹⁰⁰⁰ Smart Meter**
  The Solar-Log¹⁰⁰⁰ makes it possible to measure the consumption of your own self-produced energy, to control the consumption and to display this in graphic and tabular formats via the Solar-Log™ WEB. The Solar-Log¹⁰⁰⁰ can switch on and off up to 4 external consumers. In order to consume the power that you have produced yourself, a digital meter reader is required. As a consumption meter, it is used to measure the power consumed and to display this in comparison to the power produced.

- **Solar-Log¹⁰⁰⁰ & Solar-Log™ String Connection Box (SCB) or String Monitoring Box (SMB)**
  The Solar-Log¹⁰⁰⁰, in connection with Solar-Log™ WEB and the SCB or SMB, monitors each individual string and ensures secure and accurate monitoring of PV plants.

Representative presentation

- **Solarfox large display and external displays**
  In connection with the Solar-Log™, the Solarfox large display can present the live data of a PV plant in a way that is visually appealing and in combination with individual advertising. External displays can be connected via the RS485 interface.

Cordless connection to the internet or to SMA inverters

- **Solar-Log¹⁰⁰⁰ GPRS**
  Solar-Log¹⁰⁰⁰ GPRS is the alternative to an external GPRS modem, allowing the data logger to be connected to the data network simply and securely. A GPRS connection is especially suited to free-standing plants or buildings which do not have a usable internet connection available.

- **Solar-Log¹⁰⁰⁰ WiFi**
  Solar-Log™ WiFi allows you to use the WLAN radio data network that is often available in homes and offices. The antenna that is integrated within the device is able to receive nearby WLAN networks. If the signal is weak, WLAN repeaters may be necessary.

- **Solar-Log¹⁰⁰⁰ BT**
  This data logger is equipped with a Bluetooth module and allows wireless connection to all SMA BT inverters.

- **Modem Package & Mobile Radio Package (GPRS)**
  To allow the transfer of data to the Internet.

Data export, data security and alarm function

- **Solar-Log¹⁰⁰⁰ Data Security**
  The data volume from the Solar-Log™ can be recorded for up to 20 years. The micro SD card is used to protect against any loss of data in the event of a power failure.

- **Solar-Log¹⁰⁰⁰ Alarm Function**
  Anti-theft protection is possible via a contact loop and the external alarm is possible via a potential-free contact (relay).

- **Solar-Log¹⁰⁰⁰ Data Export**
  Any new firmware or newly supported inverters can be manually imported via a USB stick. Furthermore, it is possible to manually extract or import data.

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Product comparison

	Solar-Log[200]	Solar-Log[500]	Solar-Log[1000]
Inverter communication / inverter = WR			
PM+ [(2)]	● *NEW*	● *NEW*	●
PM+ / WiFi [(2)]	● *NEW*	● *NEW*	●
PM+ / GPRS [(2)]	● *NEW*	–	●
Bluetooth (BT) [(2)]	●	●	●
WiFi (wireless LAN) [(2)]	●	●	●
Bluetooth (BT) / WiFi [(2)]	●	●	●
GPRS [(2)]	● *NEW*	–	●
Central inverter SCB and SMB [2)]	–	–	●
max. number of inverters	1	up to 10	up to 100
Communication interface	1 x RS485 / RS422	1 x RS485 / RS422	1 x RS485, 1 x RS485 / RS422 / 1 x CAN
recommended max. plant size	15 kWp	50 kWp	1 MWp
max. cable length	max. 1000 m [1)]	max. 1000 m [1)]	max. 1000 m [1)]
Plant monitoring			
String monitoring (depending on type of inverter)	●	●	●
Inverter failure, status of fault and power monitoring	●	●	●
Connection of sensors (temp. / wind)	● [3)]	● [3)]	●
E-mail and SMS alarm	●	●	●
Local alarm (pot.-free contact)	–	–	●
Yield forecast and degradation calculation	●	●	●
EEG "own power consumption": Digital current meters	●	●	●
EEG "own power consumption": Control of ext. consumers	–	–	●
Visualisation			
Integrated web servers	●	●	●
Graphic visualisation – PC local and internet	●	●	●
Graphic visualisation – USB flash drive	–	–	●
LED – status display	●	●	●
Display on device	–	2-line text display	full-graphic display
Operation on device	–	keypad entry	via touch screen
Large display RS485 / S$_0$ impulse	–	●	●
Interfaces			
Ethernet network	●	●	●
USB flash drive	–	–	●
Modem, analogue / GPRS(GSM) / DSL	–	–	●
Potential-free contact (relay)	–	–	●
Alarm contact (anti-theft)	–	–	●
General data			
Network voltage / device voltage / current consumption	115 V – 230 V / 12 V / 3 W		
Ambient temperature	-10 °C bis +50 °C		
Housing / dimensions (W x D x H) in cm / Assembly / Protection level	Plastic / 22,5 x 4 x 28,5 / Wall-mounted / IP 20 (only for interior use)		
Connection to Solar-Log™ WEB	●	●	●
Multi-lingual (DE, EN, ES, FR, IT, NL, DA)	●	●	●
Memory, Micro-SD, 2 GB, Endless-loop data recording	●	●	●
Warranty cover age	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, Powermanagement, „own power" consumption, SCB and SMB central inverters can be found on our website www.solar-log.com.
[3)] Using with a RS422 inverter on the same bus is not possible.

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In Detail

In Detail	Solar-Log^{200}	Solar-Log^{500}	Solar-Log^{1000}
Accessories	Fully packaged cable kits for most supported inverters		
	Digital Meter	Digital Meter	Digital Meter
	PowerLine Package	PowerLine Package	PowerLine Package
	RS485 Wireless Package	RS485 Wireless Package	RS485 Wireless Package
	Sensors	Sensors	Sensors
	–	–	Mobile Wireless Package
	–	–	Modem Package
	Overvoltage protection	Overvoltage protection	Overvoltage protection
Accessories for SMA inverters	Special PiggyBack RS485 (except TL-20 series) (page 39)		
	Data Module SMA RS485 (page 39)		

Top Features	Solar-Log^{200}	Solar-Log^{500}	Solar-Log^{1000}
Compatibility	Compatible with all the major inverter manufacturers, can be found on our website www.solar-log.com		
Software	Web-interface, no software installation is required.		
Easy Installation	Connection is usually possible without PC and installation expertise.		
	The inverter search and the internet registration is enabled immediately and is started automatically.	Query for additional information, then automatic inverter search and internet registration.	
Network recognition	Automatic search for the DHCP server and assignment of a valid IP address in the local network.		
Ability to be reached on the local network	WINS registration automatically takes place and the Solar-Log™ can be found in a web browser at: http://solar-log.		
	The IP address of the Solar-Log™ no longer needs to be known, unless there are several Solar-Logs on the network.		
Additional function	Monitoring and optimisation of own energy consumption	Monitoring and optimisation of own energy consumption	Monitoring and optimisation of own energy consumption
	–	–	Monitoring of central inverters
	Evaluation of Sensor Box data		
Support for the Solar-Log™ SCB and Solar-Log™ SMB	–	–	Monitoring of large systems with the support of Solar-Log^{1000} or Solar-Log^{1000} PM+ acc. to the German law § 6.1 EEG 2009 with reduction in active power above 100 kWp
	–	–	Solar-Log^{1000} PM+ standby power regulation above 100 kWp (legally stipulated in Germany since 1 July 2010)

Article number overview for all Solar-Logs

Type	Art.-No. Solar-Log^{200}	Art.-No. Solar-Log^{500}	Art.-No. Solar-Log^{1000}
Standard	255240	210501	211001
BT	255241	210502	211002
WiFi	255191	255189	255185
BT / WiFi	255192	255190	255186
PM+	255362 *NEW*	255364 *NEW*	211005
PM+ / WiFi	255363 *NEW*	255365 *NEW*	255366 *NEW*
GPRS	255349 *NEW*	–	255187
PM+ / GPRS	255402 *NEW*	–	255188

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