

SBS2.5-1VL-10



Flexible

- Multiple configuration options and extendable PV design
- For new and existing systems
- Compatible with all lithium-ion batteries

Efficient

- Most economical AC-connected system on the market
- 97% efficiency

- Integrated dynamic active power limitation for PV inverters

Simple

- One-person installation
- WLAN and intuitive web interface
- Transparency thanks to its direct connection to Sunny Portal / Sunny Places

SUNNY BOY STORAGE 2.5

Independent power generation for your home

The Sunny Boy Storage is the battery inverter for high-voltage batteries from all reputable manufacturers. With a charge and discharge power of 2.5 kW, it is ideally suited to coping with the electricity demand of a private household. The device combines the flexibility of the AC coupling with the advantages of high-voltage technology, enabling a significant reduction in system and installation costs. Thanks to the integrated web server and the direct portal access, commissioning is simple and the energy flows in the household are as transparent as possible.

However electric current is produced and consumed – whether in existing or new PV systems, using wind energy, in CHP plants or to ensure a secure supply in the event of grid failures – the Sunny Boy Storage does it all, both today and in the future, because systems with the Sunny Boy Storage can be flexibly extended at any time on both the generator and battery sides.

Technical data	Sunny Boy Storage 2.5
AC connection	
Rated power (at 230 V, 50 Hz)	2500 W
Max. apparent AC power	2500 VA
Nominal AC voltage / range	220 V, 230 V, 240 V / 180 V to 280 V
AC power frequency / range	50 Hz, 60 Hz / -5 Hz to +5 Hz
Rated power frequency / rated grid voltage	50 Hz / 230 V
Max. AC current	11 A
Power factor at rated power	1
Adjustable displacement power factor	0.8 overexcited to 0.8 underexcited
Feed-in phases / connection phases	1 / 1
Battery DC input	
Max. DC power (at $\cos \varphi = 1$)	2650 W
Max. DC voltage	500 V
DC voltage range / DC rated voltage	100 V to 500 V / 360 V
Min. DC voltage / start DC voltage	100 V / 100 V
Max. DC current	10 A
Max. DC short-circuit current	18 A
Battery type	Li-ion*
Efficiency	
Max. efficiency / European weighted efficiency	~97.0% / ~96.5%
Self-consumption with no load / standby	≤ 10 W / ≤ 2 W
Protective devices	
Input-side disconnection point	—
Ground fault monitoring / grid monitoring	● / ●
DC reverse polarity protection / AC short-circuit current capability / galvanically isolated	— / ● / —
All-pole-sensitive residual-current monitoring unit	●
Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1)	I / III
General data	
Dimensions (W / H / D)	450 / 357 / 122 mm (17.7 / 14.1 / 4.8 inches)
Inverter weight	9.2 kg (20.3 lbs)
Operating temperature range in battery operation	-40 °C to +60 °C (-40 °F to +140 °F)
Noise emission, typical	< 25 dB
Topology	Transformerless
Cooling method	Convection
Degree of protection (according to IEC 60529) / climatic category (according to IEC 60721-3-4)	IP65 / 4K4H
Max. permissible value for relative humidity (non-condensing)	1
Features/function/accessories	
DC connection / AC connection	Connector/connector
Integrated web server	●
Interfaces	Ethernet/WLAN
Communication protocols	Modbus (SMA, Sunspec), Webconnect
Battery communication	CAN Bus
Integrated dynamic active power limitation	●
Warranty: Ten years	●
Certificates and approvals (more available upon request)	CE, DIN EN 62109-1 / IEC 62109-1, VDE-AR-N4105
Certificates and approvals (currently being planned)	AS4777, C10/11/2012, CEI0-21, NEN 50438, VFR 2014, G83/2, G59/3 EN50438, RD 1699, VDE0126-1-1, PPC, NRS097, PPDS, IEC61727
Sunny Home Manager / SMA Energy Meter	○ / ○
Retrofittable battery-backup function	Q4 2016
* SMA-approved batteries, e.g. Tesla Powerwall Daily, etc.	
● Standard features ○ Optional features — not available	
Data in nominal conditions	
Provisional status January 2016	
Type designation	SBS2.5-1VL-10

EMETER-10



Now also available for applications > 63 A
thanks to external current transformers.

Easy to Use

- Quick plug and play installation
- Graphic visualization of current measured values in Sunny Portal

Flexible

- Space-saving DIN rail mounting in household distribution thanks to compact enclosure
- Flexible use in applications >63 A thanks to external current transformers

- Suitable for universal use regardless of existing energy meter

High Performance

- Fast three-phase, bidirectional reading of measured values for effective energy management
- Fast Speedwire communication

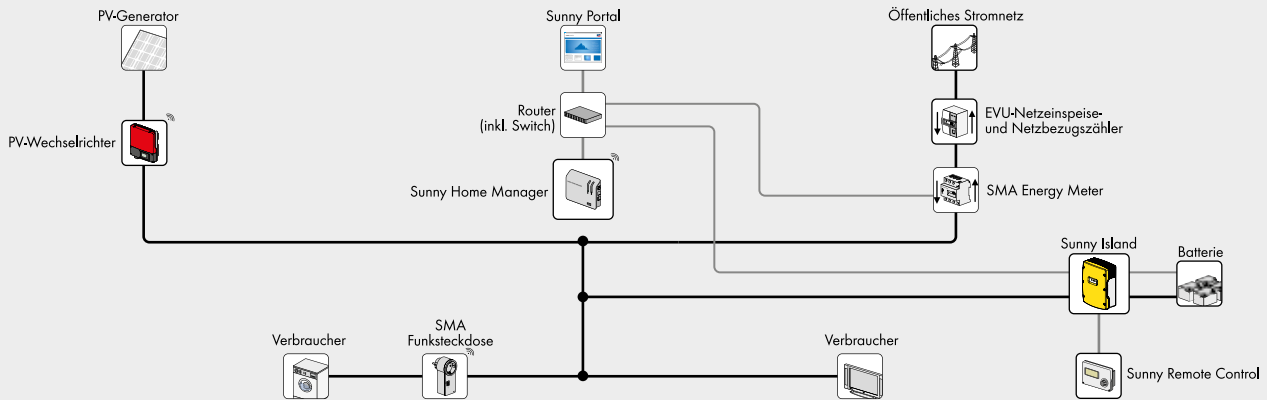
SMA ENERGY METER

Universal recording of measured values for intelligent energy management

The powerful measurement solution for intelligent energy management within the SMA Smart Home: The SMA Energy Meter takes phase-accurate and balanced electrical measured values, such as a grid feed-in and purchased electricity meter, and communicates these values via Speedwire. Thanks to its ability to quickly acquire bidirectional measured values, the SMA Energy Meter is the ideal supplier of data for intelligent energy management within the SMA Smart Home. All PV generation data, purchased electricity and grid feed-in can be transmitted via standard Ethernet cable to the Sunny Home Manager, for example, or, in the future, to the Sunny Boy Smart Energy. This, in turn, facilitates optimal energy monitoring, effective load and battery management and reliable active power limitation at the grid feed-in point while taking self-consumption into account.

* Can also be used in single-phase systems.

Storage application example



Technical data

Communication

Fieldbus

Max. radio range

Speedwire / fast Ethernet

Inputs (voltage and current)

Nominal voltage

Frequency

Nominal current / limiting current per line conductor

Start-up current

Connection cross-section

Torque for screw terminals

Ambient conditions in operation

Ambient temperature

Storage temperature range

Protection class (according to IEC 62103)

Degree of protection (according to IEC 60529)

Max. permissible value for relative humidity (non-condensing)

General data

Dimensions (W / H / D)

Individual units

Weight

Mounting location

Mounting type

Status display

Self-consumption

Measurement accuracy

Sampling frequency

Languages of the manual

Features

Warranty

Certificates and permits (more available on request)

Last updated: February 2014

● Standard features ○ Optional features — Not available / Data at nominal conditions

Type designation

SMA Energy Meter

Speedwire, 10/100 Mbit/s

100 m (between two devices)

230 V / 400 V

50 Hz, 60 Hz / $\pm 5\%$

5 A / 63 A (>63 A can be connected via external current transformers)

<25 mA

1.0 mm² to 25 mm²

2.0 Nm

-25 °C to +40 °C (-13 °F ... +104 °F)

-25 °C ... +70 °C (-13 °F ... +158 °F)

II

IP2X

5% - 95%

88 / 70 / 65 mm

(3.46 / 2.76 / 2.56 inch)

4

0.3 kg (0.66 lb)

Switch or meter cabinet

Top-hat rail mounting

2 LEDs

<2 W

1%

<1 Hz

German, English, Italian, French, Spanish, Dutch, Portuguese, Greek

2 years

www.SMA-Solar.com

EMETER-10



SMA Factory Warranty

Only applies for the following products: Sunny Boy, Windy Boy, Windy Boy Protection Box, Sunny Mini Central, Sunny Multigate, Sunny Tripower, Windy Tripower, Sunny Beam, Sunny WebBox, Sunny Matrix, Sunny SensorBox, Power Reducer Box, PV Offset Box, Fuel Save Controller.

The statutory warranty obligation of the seller of your device is not affected by this warranty and remains fully valid for 24 months from the date of delivery (subject to the comments below for Australian purchasers).

For the above mentioned products, you receive an SMA factory warranty valid for five years from the date of purchase. For the Fuel Save Controller, you will receive a factory warranty valid for two years from the date of purchase. The SMA factory warranty covers any costs for repair or spare parts during the agreed period beginning on the date of purchase of the device, subject to the following conditions.

Warranty Conditions

If a device becomes defective during the agreed SMA factory warranty period and, unless this should be impossible or disproportionate, one of the following options will be selected at the discretion of SMA:

- device repair at SMA, or
- device repair on-site, or
- exchange for a replacement device of equivalent value with regard to model and age.

In the latter case, the remainder of the factory warranty entitlement will be transferred to the replacement device and your entitlement will be documented at SMA.

The term "disproportionate" as referred to above applies in particular if, as a result of the envisaged measures, SMA were to incur costs deemed unreasonable according to the following criteria:

- in view of the value that the device would have without the defect,
- taking into account the significance of the defect, and
- after consideration of alternative workaround possibilities that SMA customers could revert to without significant inconvenience.

The factory warranty includes the costs of SMA for work and material for the restoration of faultless functioning in SMA's factory or for on-site repair work by SMA service personnel. All other costs, particularly shipping costs, travel and accommodation costs of SMA personnel for on-site repairs as well as costs of the customer's own employees are not included in the factory warranty (subject to the comments below for Australian purchasers).

When devices for private use are installed by natural persons in the EU region, Australia, Chile, India, Israel, South Africa, South Korea, Croatia, New Zealand, Norway, Switzerland, Thailand and the United Arab Emirates, the factory warranty also covers shipping costs or travel and accommodation costs for SMA service personnel during on-site repairs. This does not apply to islands and overseas territories of the above mentioned states.

The replacement of the products Sunny Boy 240 and Sunny Multigate only takes place via the shipment of replacement devices. For these products, the SMA service personnel will not be available for repairs on-site.

To determine the factory warranty entitlement, please submit a copy of the purchasing invoice or a copy of the warranty certificate, if necessary including the receipt of any extended warranty. The type label on the device must be completely legible. Otherwise, SMA is entitled to refuse warranty services under this factory warranty.

Report defective devices with a detailed error description and the error code to the SMA Service Line. If we agree to a replacement, we generally send an equivalent replacement device, packaged appropriately for transport, within two working days. The defective device is to be packed in this transport packaging for return transport to SMA (subject to the comments below for Australian purchasers). All warranty services are free of charge only if the course of action is agreed with SMA in advance.

Scope of the Factory Warranty

The factory warranty does not cover damage that has occurred due to any of the following reasons:

- Transport damage
- Incorrect installation or commissioning
- Failure to observe the user manual, the installation manual, or the maintenance instructions
- Modifications, changes, or attempted repairs
- Incorrect use or inappropriate operation
- Insufficient ventilation of the device
- Failure to observe the applicable safety regulations
- Force majeure (e.g., flash of lightning, overvoltage, storm, fire)

Neither does it cover cosmetic defects which do not influence the energy production. Claims that go beyond the rights cited in the warranty conditions, in particular claims for compensation for direct or indirect damages arising from the defective device, for compensation for costs arising from disassembly and installation, or loss of profits are not covered by the factory warranty, unless SMA is not subject to statutory liability. In such cases, please contact the company that sold you the device or SMA. Possible claims in accordance with the law on product liability remain unaffected.

All claims arising from or in connection with this warranty are subject to German law (subject to the comments below for Australian purchasers). Kassel, Germany is the exclusive place of jurisdiction for all disputes arising from or in connection with this warranty.

Information for Australian purchasers - Consumer statutory rights

For purchasers in Australia, your rights under this SMA factory warranty are in addition to any non-excludable statutory rights you may have as a Consumer, as that term is defined in section 3 of the Australian Consumer Law. Nothing in this SMA factory warranty is intended to affect your non-excludable statutory rights. Your non-excludable statutory rights remain fully valid for the period required by the Australian Consumer Law.

For purchases by an Australian Consumer, our products come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. Australian Consumers may send a claim under this warranty to

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For purchasers by an Australian Consumer, all claims arising from or in connection with this warranty are subject to Australian law, which is the exclusive place of jurisdiction for all disputes arising from or in connection with this warranty.

For further information, visit us at www.SMA-Solar.com under the section "Service".