

Skype



SUNNY BOY SMART ENERGY

The easiest solution for typical household PV applications. This combination of a modern PV inverter and a battery with an effective capacity of 2 kWh not only optimizes increased self-consumption but also makes easy use of home-generated solar power possible virtually around the clock.



Sunny Boy Smart Energy



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An Excellent Combination: Sunny Boy and Battery

With its **integrated battery**, the **Sunny Boy Smart Energy** offers two advantages. Not only does it provide a sensible way to increase **self-consumption**, but it also makes it **easy to use self-produced solar power** after

the sun goes down.

- Significantly reduced initial investment thanks to an application-oriented battery capacity of 2 kWh
- No need to design the battery system – so no battery expertise is required
- Quick and easy wall mounting
- Efficient charge management and load control
- Maximized reliability through lithium-ion cells from LG Chem

SMA Integrated Storage System, the Simple Storage Solution

Together with the **Sunny Home Manager**, the **Sunny Boy Smart Energy** is the central component of the **SMA Integrated Storage System**. It offers an incredibly easy path to greater **independence** as part of the SMA Smart Home intelligent energy management.

- Approximately 52 percent less electricity purchased from electric utility companies*
- Self-consumption rate increased from 30 percent to typically 55 percent**
- Usage of solar power possible nearly 24 hours a day
- All PV power generated annually is used even when the active power is limited to 70 percent or 60 percent of the nominal PV array power in accordance with the Renewable Energy Sources Act (EEG) or the energy storage subsidy.
- Outstanding efficiency in terms of power conversion and temporary power storage

* Compared to a household without a PV system

** All figures are based on an annual PV generation of 5,000 kWh, annual power consumption of the equivalent amount, an effective battery capacity of 2 kWh and use of a Sunny Home Manager.

Intelligent Energy Management SMA Smart Home

Within the **SMA Smart Home**, the **Sunny Boy Smart Energy** and **Sunny Home Manager** ensure that self-produced solar power is used in the best possible way, intelligently distributed and – as an option – stored. This delivers **increased self-consumption**, improves transparency and guarantees **greater independence**.

- Planning reliability and cost savings with solar power at fixed, low rates
- Maximize the eco-friendliness of your energy supply by using solar power from your own roof
- Greater independence with no compromises in terms of comfort or supply reliability
- Automatic optimization functions that take individual preferences into account
- Cost-saving potential is made visible through complete energy budget transparency

SPECIFICATIONS

Sunny Boy
3600 Smart
Enerav

Sunny Boy
5000 Smart
Enerav

	5000VA	6000VA
DC Input		
Max. DC power (con $\cos \phi = 1$)	5200 W	6600 W
Max. Input voltage	750 V	750 V
Rated input voltage	350 V	350 V
MPP Voltage range	175 to 500 V	175 to 500 V
Min. input voltage	125 V	125 V
Initial input voltage	150 V	150 V
Max. input current. Input A / Input B	15 A / 15 A	15 A / 15 A
Max. input current per string. Input A / Input B	15 A / 15 A	15 A / 15 A
Number of independent MPP inputs / strings per MPP input	2 / A: 2; B: 2	2 / A: 2; B: 2
AC output		
Rated power at 230 V 50 Hz	3680 W	4600 W
Max. AC apparent power	3680 VA	5000 VA *
Nominal AC voltage	220, 230, 240 V	220, 230, 240 V
AC voltage range	180 to 280 V	180 to 280 V
AC power frequency	50, 60 Hz	50, 60 Hz
AC frequency range	± 5 Hz	± 5 Hz
Rated AC voltage and frequency	230 V 50 Hz	230 V 50 Hz
Max. output current	16 A	22 A
Power factor at rated power	1	1
Adjustable displacement power factor	0.8 lagging to 0.8 leading	0.8 lagging to 0.8 leading
Fee-in phases / connection phases	1 / 1	1 / 1
Efficiency		
Max. efficiency	97,1 %	97,1 %
European efficiency	96,5 %	96,5 %
Max. battery charging /	97 %	97 %

charging / discharging		
Max. battery efficiency	98 %	98 %
Battery		
Manufacturer	LG Chem	LG Chem
Type	BAT-2.0-A-SE- 10	BAT-2.0-A-SE- 10
Technology	Li-Ion	Li-Ion
Continuous power	1,5 kW	1,5 kW
Max. Power	2 kW	2 kW
Nominal capacity / usable capacity	2 / 2 kWh	2 / 2 kWh
Rated battery voltage	150 V	150 V
Max charge / discharge current	12,5 A	12,5 A
Service life at cyclic operation	> 10 years	> 10 years
Cycles	≥ 4100 at 100% DoD	
Protective devices		
Input-side disconnection point	Yes	Yes
Ground fault monitoring	Yes	Yes
Grid monitoring	Yes	Yes
DC reverse polarity protection	Yes	Yes
AC short-circuit current capability	Yes	Yes
Galvanic isolated	No	No
All-pole sensitive residual-current monitoring unit	Yes	Yes
Protection Class according to IEC 62103	I	I
Overvoltage category according to IEC 60664-1	III	III
Integrated battery fuse	35 A	35 A
General data		
Dimensions (W x H x D)	877 x 711 x 252 mm	
Inverter weight	30 Kg	
Battery weight	27,5 Kg	
Temperature range	0 to 40 °C	

Noise emission	≤ 25 dB(A)	≤ 25 dB(A)
Night consumption	< 0,5 W	< 0,5 W
Battery system connection	DC connection	DC connection
Topology	Transformerless	Transformerless
Cooling method	Convection	Convection
Degree of protection according to IEC60529 (inverter/battery)	IP54 / IP21	IP54 / IP21
Climatic category according to IEC 60721.3-4	3K5	3k5
Max. humidity (non-condensing)	95%	95%

Features

DC connection	Sunclix
AC connection	Spring-case terminal
Display	Graphic
Interface Speedwire / Webconnect	Yes
Warranty	5 years
Optional inverter warranty	10, 15, 20 years
Optional battery warranty	7 years
Certificated and approvals	CE, DIN EN 62109-1/IEC 62109-1, VDE 0126-1-1, VDE AR-N 4105, VDE-ST-Li-ESS-001:2013/03, CEIO-21, G59/3

* 4600 VA according to VDE-AR-N 4105

** Does not apply to all national appendices of EN 50438

*** Available via extended warranty

ACCESSORIES

ModBus Protocol Interface

- With the Modbus protocol interface, SMA makes flexible integration of inverters possible. Through the use of this well-known industry standard, you can integrate SMA inverters into your systems without having to follow the SMA-specific inverter protocol.

Multifunctional Relay

- ✦ The multifunction relay can be used for various purposes whereby you select one of six operating modes for controlling the multifunction relay: fault indication, increased self-consumption, load control, battery charging fan control and signal

battery charging, fan control and signal transmission at the start of feed-in operation.

DOWNLOADS



Sunny Boy 1.5 - 2.5
(460.64 KiB)



Sunny Boy 3.0 - 5.0
(566.14 KiB)



Sunny Boy Storage
SB25 (452.79 KiB)



Sunny Boy Smart
Energy (353.33 KiB)



SMA Tigo TS4 EN
(412.73 KiB)



SMA Sunny Boy TL
EN (552.85 KiB)



SMA Sunny Tripower
5-12000 TL EN
(499.02 KiB)