

# SUNNY BOY 3600 / 5000 SMART ENERGY



SB 3600SE-10 / SB 5000SE-10



## Easy to Use

- Installed like a PV inverter
- All-in-one enclosure
- No battery sizing required

## Efficient

- Optimal, effective year-round battery capacity of 2 kWh
- Maximized self-consumption through efficient charge and load management

## Safe

- VDE-certified lithium-ion battery and inverter
- Battery partner LG Chem is the global leader

## Communicative

- Integrated Webconnect function communicates with Sunny Portal via Ethernet
- Multifunction relay for easy load management
- Easily and flexibly combined with SMA Smart Home components

## SUNNY BOY 3600 / 5000 SMART ENERGY

The perfect combination of PV inverter and battery

It comes with everything. The new Sunny Boy Smart Energy the easiest solution for typical residential PV applications. This combination of a modern PV inverter and a battery with an effective capacity of 2 kWh not only optimizes energy consumption but also makes it possible to use home-generated solar energy around the clock. The Sunny Boy Smart Energy is the first wall-mountable, series-produced PV inverter to feature an integrated lithium-ion battery, making it perfect for use in the SMA Smart Home. Additionally, the integrated Webconnect function provides worldwide access to consumption and yield data via Sunny Portal.

Technical Data	Sunny Boy 3600 Smart Energy	Sunny Boy 5000 Smart Energy
<b>Input (DC)</b>		
Max. DC power (at $\cos \phi = 1$ )	5200 W	6600 W
Max. input voltage	750 V	750 V
MPP voltage range / rated input voltage	175 V to 500 V / 350 V	175 V to 500 V / 350 V
Min. input voltage / initial input voltage	125 V / 150 V DC	125 V / 150 V DC
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
<b>Output (AC)</b>		
Rated power (at 230 V, 50 Hz)	3680 W	4600 W
Max. AC apparent power	3680 VA	5000 VA*
Nominal AC voltage / range	220 V, 230 V, 240 V / 180 V to 280 V	220 V, 230 V, 240 V / 180 V to 280 V
AC power frequency / range	50 Hz, 60 Hz / $\pm 5$ Hz	50 Hz, 60 Hz / $\pm 5$ Hz
Rated power frequency / rated grid voltage	50 Hz / 230 V	50 Hz / 230 V
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
Feed-in phases / connection phases	1 / 1	1 / 1
<b>Efficiency</b>		
Max. efficiency / European efficiency	97.1% / 96.5%	97.1% / 96.7%
Max. battery charging / battery discharging efficiency	97% / 97%	97% / 97%
Max. battery efficiency	98%	98%
<b>Battery</b>		
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 / max. power	1.5 kW / 2kW	1.5 kW / 2kW
Nominal capacity / usable capacity	2 kWh / 2 kWh	2 kWh / 2 kWh
Rated battery voltage	150 V	150 V
Max. charge / discharge current	12.5 A	12.5 A
Calendar service life during cycle operation	> 10 years	> 10 years
Cycle service life	$\geq 4100$ at 100% DoD	$\geq 4100$ at 100% DoD
<b>Protective devices</b>		
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	I / III
Integrated battery fuse	35 A	35 A
<b>General data</b>		
Dimensions (W / H / D)	877 mm / 711 mm / 252 mm (34.5 inch / 28 inch / 9.9 inch)	
Weight of inverter / battery	30 kg (66.1 lb) / 27.5 kg (60.6 lb)	
Operating temperature range in battery operation	0 °C to +40 °C (+32 °F to +104 °F)	
Noise emission (typical)	$\leq 25$ dB(A)	$\leq 25$ dB(A)
Self-consumption (at night)	< 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 IEC 60529) inverter / battery section	IP54 / IP21	IP54 / IP21
Climatic category (according to IEC 60721-3-4)	3K5	3K5
Maximum permissible value for relative humidity (non-condensing)	95%	95%
<b>Features</b>		
DC connection / AC connection	SUNCLIX / spring-cage terminal	SUNCLIX / spring-cage terminal
Display	Graphic	Graphic
Interface: Speedwire / Webconnect	●	●
Inverter warranty: 5 / 10 / 15 / 20 years	● / ○ / ○ / ○ / ○	● / ○ / ○ / ○ / ○
Battery warranty 5 / 7*** years	● / ○	● / ○
Certificates and approvals (others available upon request)	CE, DIN EN 62109-1 / IEC 62109-1, VDE 0126-1-1, VDE AR-N 4105, VDE-ST-Li-ESS-001:2013/03, CEI0-21, G59/3	CE, DIN EN 62109-1 / IEC 62109-1, VDE 0126-1-1, VDE AR-N 4105, VDE-ST-Li-ESS-001:2013/03, CEI0-21, G59/3, G83/2
Certificates and approvals (planned)	AS 3100, AS 4777, C10/11, EN 50438**, IEC 62109-2 PPC, NEN 50438, PPDS, RD 1699, VFR 2014	
Technical data is subject to change; last update 2014-09-16		
● Standard feature ○ Optional feature – Not available		
Data at nominal conditions		
* 4600 VA according to VDE-AR-N 4105		
** Does not apply to all national appendices of EN 50438		
*** Available via extended warranty		
Type designation	SB 3600SE-10	SB 5000SE-10