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

Reliable

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

Communicative

- Integrated Webconnect functionality communicates with Sunny Portal via Ethernet
- Multifunction relay for simple 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 is currently the easiest solution for common household PV applications. This combination of a modern PV inverter and a battery with an effective capacity of 2 kWh not only offsets more 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 and tailored for the shift to renewable power. Moreover, 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
Input (DC)		
Max. DC power (at cos φ = 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
Output (AC)		
Rated power (@ 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 grid frequency / range	50 Hz, 60 Hz / ± 5 Hz	50 Hz, 60 Hz / ± 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 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging
Feed-in phases / connection phases	1 / 1	1 / 1
Efficiency		
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 %
Battery		
Manufacturer	LG Chem	LG Chem
Technology	Li-Ion	Li-Ion
Continuous power	1.5 kW	1.5 kW
Usable capacity	2 kWh	2 kWh
Rated battery voltage	150 V	150 V
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 (acc. to IEC 62103) / overvoltage category (acc. to IEC 60664-1)	I / III	I / III
General Data		
Dimensions (W / H / D)	877 / 711 / 252 mm 34.5 / 28 / 9.9 inches	877 / 711 / 252 mm 34.5 / 28 / 9.9 inches
Weight of inverter / battery	30 kg / 27.5 kg (66.1 lb / 60.6 lb)	30 kg / 27.5 kg (66.1 lb / 60.6 lb)
Operating temperature range in battery operation	0 °C to +40 °C (+32 °F to +104 °F)	0 °C to +40 °C (+32 °F to +104 °F)
Noise emission (typical)	≤ 25 dB(A)	≤ 25 dB(A)
Self-consumption (night)	< 0.5 W	< 0.5 W
Topology	Transformerless	Transformerless
Cooling method	Convection	Convection
Degree of protection (according to IEC 60529) inverter / battery section	IP54 / IP21	IP54 / IP21
Climatic category in accordance with IEC 60721-3-4	3K5	3K5
Maximum permissible value for relative humidity (non-condensing)	95%	95%
Features		
DC connection / AC connection	SUNCLIX / spring-cage terminal	SUNCLIX / spring-cage terminal
Display	Graphic	Graphic
Interface: Speedwire / Webconnect	●	●
Inverter warranty: 5 / 10 /15 / 20 / 25	● / O / O / O / O	● / O / O / O / O
Battery warranty	7 years	7 years
Certificates and permits (more available on request)	CE, DIN EN 62109-1 / IEC 62109-1, VDE 0126-1-1, VDE AR-N 4105, VDE-ST-Li-ESS-001:2013/03	CE, DIN EN 62109-1 / IEC 62109-1, VDE 0126-1-1, VDE AR-N 4105, VDE-ST-Li-ESS-001:2013/03
Certificates and approvals (planned)	AS 3100, AS 4777, C10/11, CEI0-21, EN 50438**, G59/3, G83/2, IEC 62109-2 PPC, NEN 50438, PPDS, RD 1699, VFR 2014	AS 3100, AS 4777, C10/11, CEI0-21, EN 50438**, G59/3, G83/2, IEC 62109-2 PPC, NEN 50438, PPDS, RD 1699, VFR 2014
Technical data is preliminary and subject to change		
● Standard feature O Optional feature – Not available		
Data at nominal conditions		
*4600 VA with VDE-AR-N 4105 / **Does not apply to all national appendices of EN 50438		
Type designation	SB 3600SE-10	SB 5000SE-10