SBS2.5-1VL-10

ees AWARD 2016 winner

Flexible

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

Easy to use

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

Efficient

- Most cost-efficient AC-connected system on the market
- 97% efficiency

- Dynamic export control for SMA PV inverters with Webconnect

SUNNY BOY STORAGE 2.5

Simply greater independence

Sunny Boy Storage is the battery inverter designed for new high voltage batteries from leading manufacturers. With a charge and discharge power of 2.5 kW, it is ideally suited to handle 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.

No matter how the energy is produced and consumed—whether with existing or new PV systems, wind energy or a CHP plant—Sunny Boy Storage can handle everything, today and in the future. Systems with Sunny Boy Storage also have complete flexibility to meet a system owner's changing needs allowing either the generator or battery storage to be individually extended or upgraded at any time.

SUNNY BOY STORAGE 2.5

KEEP UP WITH EVERYTHING
THE RIGHT SOLUTION, NOW AND IN THE FUTURE

Systems with the Sunny Boy Storage can be flexibly adapted to individual needs at any time. Whether the family situation changes, perhaps with the purchase of an electric car, which needs charging daily, or with a swimming pool in the garden for pleasure—with the Sunny Boy Storage, storage systems and PV systems can always be designed or expanded to suit specific requirements. The battery inverter is also versatile when it comes to the method of generating energy. From the photovoltaic system and the wind turbine system to the combined heat and power plant, anything is possible. For a secure electricity supply at any time and greater independence from rising electricity costs.

SUITABLE FOR ANY INITIAL SITUATION

NEW INSTALLATION: PV SYSTEM WITH BATTERY STORAGE
A PV system with a storage system makes the user independent of conventional power generators and rising electricity costs.
With the Sunny Boy Storage, this is particularly easy and cost-effective.

MODERNIZE: RETROFIT PV SYSTEM WITH BATTERY STORAGE
PV system operators require only three additional components—Sunny Boy Storage, battery and Energy Meter—to turn their PV system into a fully-fledged storage system. In this way, they can use even more self-generated solar energy in their own home.
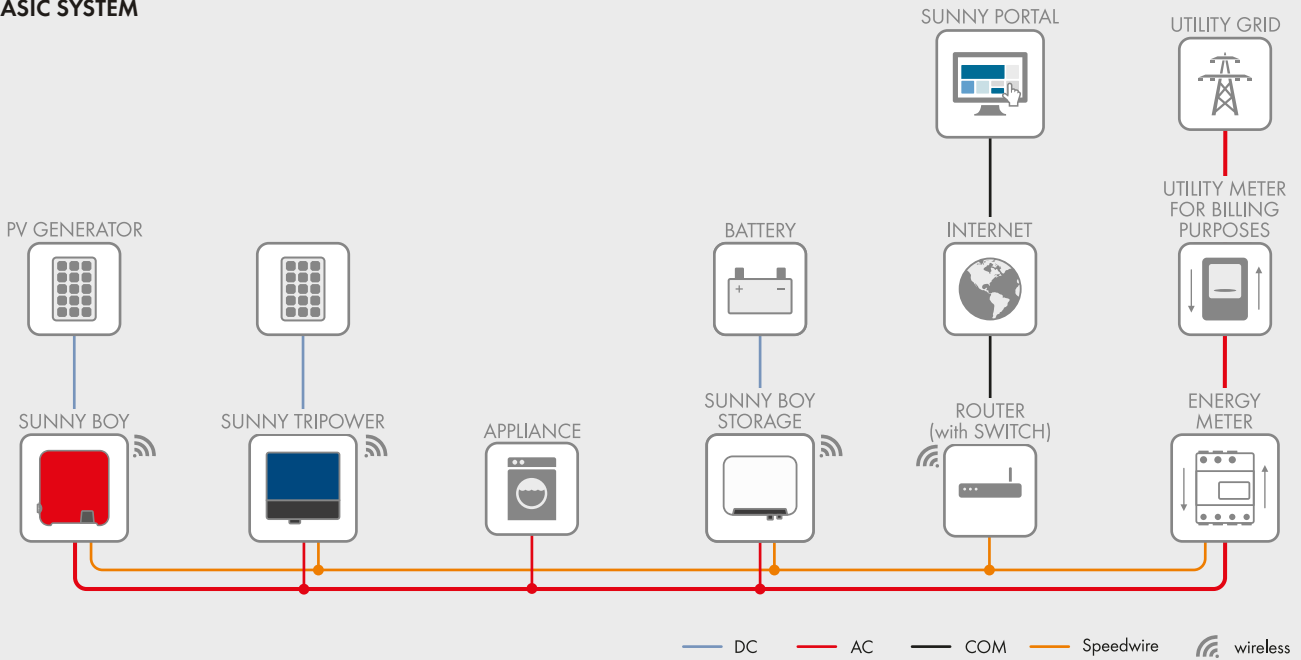

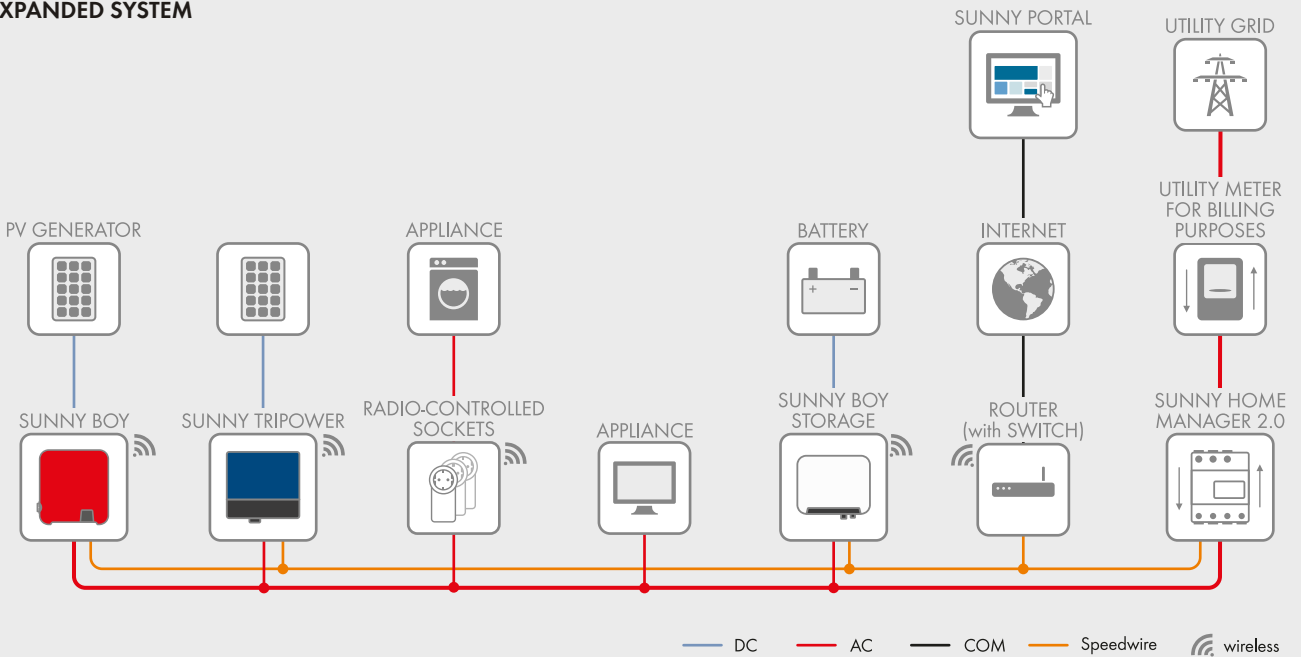### EXPAND: ALIGN AN EXISTING PV STORAGE SYSTEM TO INCREASING DEMAND
Retrospective system expansion is possible at any time. The PV system and the Sunny Boy Storage system can be expanded independently of each other and flexibly adapted to individual demand.

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 φ =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 / Euro-eta	96.8 % / 96.1 %
Self-consumption with no load and battery consumption / standby	≤ 10 W / ≤ 2 W
Protective devices	
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 (as per IEC 62103) / overvoltage category (according to IEC 60664-1)	I / III
General Data	
Dimensions (W / H / D)	450 mm / 357 mm / 122 mm (17.7 inches / 14.1 inches / 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) / climate category (according to IEC 60721-3-4)	IP65 / 4K4H
Max. permissible value for relative humidity (non-condensing)	100%
Features / function / accessories	
DC connection / AC connection	SUNCLIX / AC connector
Display via Smart Phone, Tablet, Laptop	●
Integrated webserver	●
Interfaces: Ethernet / WLAN	● / ●
Communication protocols	Modbus (SMA, Sunspec), Webconnect
Battery communication	CAN bus
Integrated dynamic active power limitation (0% to 100%)	●
Warranty: 5 / 10 years	● / ●**
Certificates and approvals (more available upon request)	AS4777, C10/11-LV1:2018, C10/11-LV2:2018, CE, DIN EN 62109-1 / IEC 62109-1, EN50549-1:2018, EN50549-2:2018, G98/1:2018, G99/1:2018, NEN 50438, UNE206007/UNE206006/ RD1699, VDE0126-1-1, VDE-AR-N4105:2018, VFR 2014,
Certificates and approvals (planned)	IEC61727, NRS097, PPC, PPDS
Sunny Home Manager / SMA Energy Meter	○ / ○
Retrofittable battery-backup function	−
SMA inverter with Webconnect	●
SMA inverter without Webconnect	○
Retrofit with inverters from other suppliers	○

* see "List of Approved Batteries" at www.SMA-Solar.com

** with registration in Sunny Portal / Sunny Places

● Standard features   ○ Optional features   − not available

Data in nominal conditions

Technical data is subject to change; last update 08/2020

Type designation	SBS2.5-1VL-10

BASIC SYSTEM

SUNNY PORTAL	UTILITY GRID

PV GENERATOR · BATTERY · INTERNET · UTILITY METER FOR BILLING PURPOSES

SUNNY BOY · SUNNY TRIPOWER · APPLIANCE · SUNNY BOY STORAGE · ROUTER (with SWITCH) · ENERGY METER

— DC   — AC   — COM   — Speedwire   📶 wireless

EXPANDED SYSTEM

SUNNY PORTAL	UTILITY GRID

PV GENERATOR · APPLIANCE · BATTERY · INTERNET · UTILITY METER FOR BILLING PURPOSES

SUNNY BOY · SUNNY TRIPOWER · RADIO-CONTROLLED SOCKETS · APPLIANCE · SUNNY BOY STORAGE · ROUTER (with SWITCH) · SUNNY HOME MANAGER 2.0

— DC   — AC   — COM   — Speedwire   📶 wireless

Basic system functions

- Very easy commissioning via integrated WLAN and Speedwire interface
- Maximum transparency thanks to visualization in Sunny Portal / Sunny Places
- Maximum system yield thanks to dynamic limit of feed-in to the grid between 0 and 100%

*1) SMA single-phase / three-phase PV inverter **with** Webconnect

Expanded system functions

- Basic system functions
- Maximum energy use thanks to forecast-based charging
- Increased self-consumption thanks to intelligent load control
- Reduction in energy costs thanks to usage of time-based electricity tariffs

*2) SMA single-phase / three-phase PV inverter **without** Webconnect
*3) via SMA radio-controlled socket or standardized data communication, e.g. EEBus

SMA-Solar.com

SMA Solar Technology