SUNNY BOY 3.0 / 3.6 / 4.0 / 5.0 / 6.0
with SMA SMART CONNECTED

SB3.0-1AV-41 / SB3.6-1AV-41 / SB4.0-1AV-41 / SB5.0-1AV-41 / SB6.0-1AV-41



Compact

- One-person installation due to low weight of 17.5 kg
- Compact design means minimum space requirements

Easy to use

- 100% plug and play installation
- Free online monitoring via Sunny Places
- Automated service thanks to SMA Smart Connected

High yields

- Use of surplus energy through dynamic active power limitation
- Shade management with OptiTrac Global Peak or integrated TS4-R communication

Combinable

- Intelligent energy management and storage solutions can be added anytime
- Can be combined with TS4-R components for module optimization

SUNNY BOY 3.0 / 3.6 / 4.0 / 5.0 / 6.0

Higher yields for private homes – intelligent solar power generation

The new Sunny Boy 3.0–6.0 ensures maximum energy yields for private homes. This inverter combines the integrated Service SMA Smart Connected service and intelligent technology for all ambient requirements. Thanks to its extremely light design, the device can be installed quickly and easily. The Sunny Boy can be commissioned quickly via smartphone or tablet thanks to its integrated web interface. For specific requirements on the roof, such as shading, the TS4-R module optimizers can be added into the system, with all communication and monitoring facilitated through the inverter. Current communication standards make the inverter future-proof, meaning intelligent energy management solutions as well as SMA storage solutions can be flexibly added anytime.

SMA SMART CONNECTED

The integrated service for ease and comfort

SMA Smart Connected* is the free monitoring of the inverter via the SMA Sunny Portal. If there is an inverter fault, SMA proactively informs the PV system operator and the installer. This saves valuable working time and costs.

With SMA Smart Connected, the installer benefits from rapid diagnoses by SMA. They can thus quickly rectify the fault and score points with the customer thanks to the attraction of additional services.



ACTIVATION OF SMA SMART CONNECTED

During registration of the system in the Sunny Portal, the installer activates SMA Smart Connected and benefits from the automatic inverter monitoring by SMA.

AUTOMATIC INVERTER MONITORING

SMA takes on the job of inverter monitoring with SMA Smart Connected. SMA automatically checks the individual inverters for anomalies around the clock during operation. Every customer thus benefits from SMA's long years of experience.

PROACTIVE COMMUNICATION IN THE EVENT OF FAULTS

After a fault has been diagnosed and analyzed, SMA informs the installer and end customer immediately by e-mail. Everyone is thus optimally prepared for the troubleshooting. This minimizes the downtime and saves time and money. The regular power reports also provide valuable information about the overall system.

REPLACEMENT SERVICE

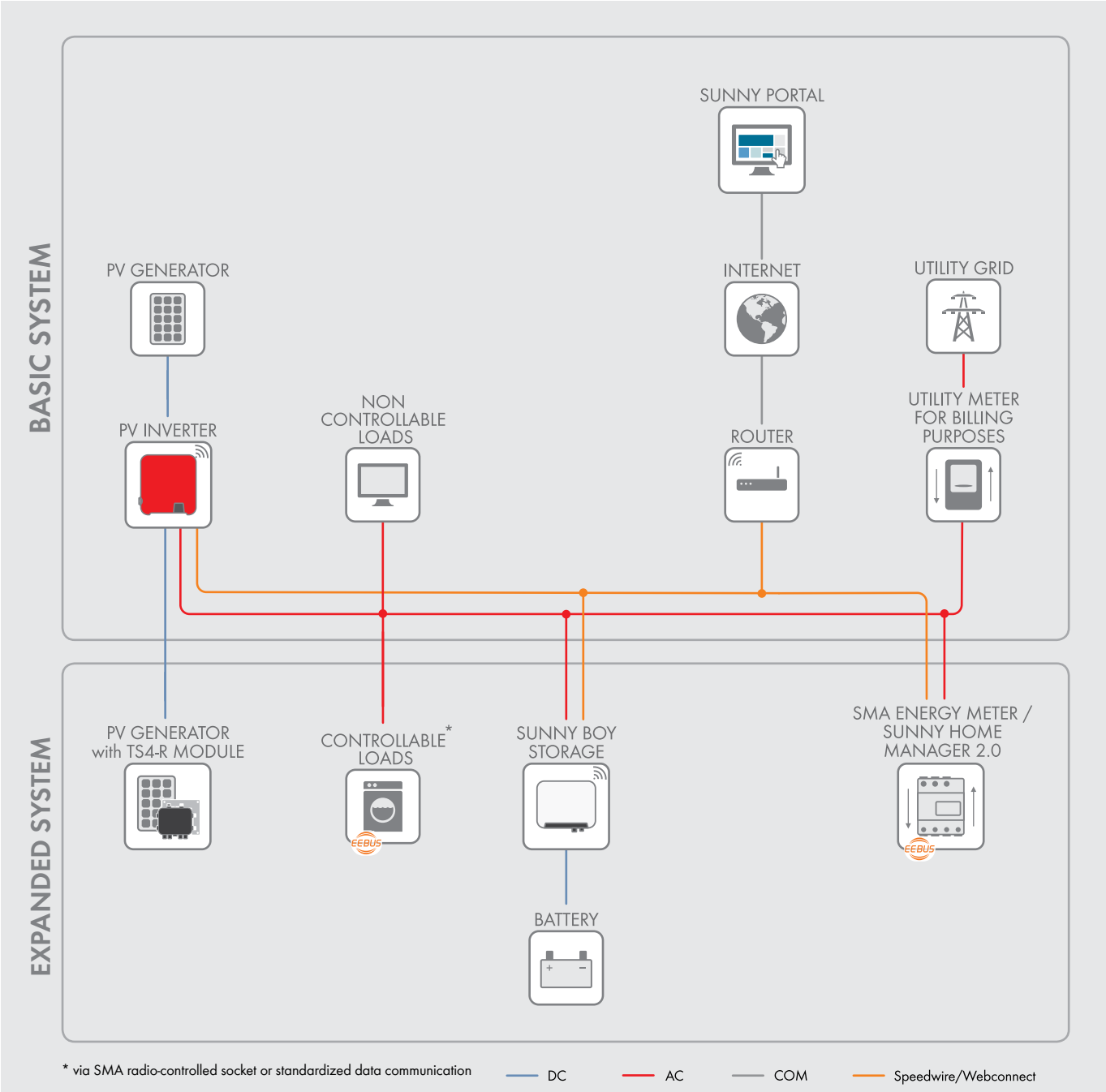
If a replacement device is necessary, SMA automatically supplies a new inverter within one to three days of the fault diagnosis. The installer can contact the PV system operator of their own accord and replace the inverter.

PERFORMANCE SERVICE

The PV system operator can claim compensation from SMA if the replacement inverter cannot be delivered within three days.

* Details: see document "Description of Services – SMA SMART CONNECTED"

Technical data	Sunny Boy 3.0	Sunny Boy 3.6	Sunny Boy 4.0	Sunny Boy 5.0	Sunny Boy 6.0
Input (DC)					
Max. generator power	5500 Wp	5500 Wp	7500 Wp	7500 Wp	9000 Wp
Max. input voltage	600 V				
MPP voltage range	110 V to 500 V	130 V to 500 V	140 V to 500 V	175 V to 500 V	210 V to 500 V
Rated input voltage	365 V				
Min. input voltage / initial input voltage	100 V / 125 V				
Max. input current input A / input B	15 A / 15 A				
Max. DC short-circuit current input A / input B	22 A / 22 A				
Number of independent MPP inputs / strings per MPP input	2 / A:2; B:2				
Output (AC)					
Rated power (at 230 V, 50 Hz)	3000 W	3680 W	4000 W	5000 W[1)]	6000 W
Max. apparent power AC	3000 VA	3680 VA	4000 VA	5000 VA[1)]	6000 W
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. output current	16 A	16 A	22 A[2)]	22 A[2)]	26.1 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				
Efficiency					
Max. efficiency / European Efficiency	97.0% / 96.4%	97.0% / 96.5%	97.0% / 96.5%	97.0% / 96.5%	97.0 % / 96.6 %
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 (as per IEC 61140) / overvoltage category (according to IEC 60664-1)	I / III				
General data					
Dimensions (W / H / D)	435 mm / 470 mm / 176 mm (17.1 inches / 18.5 inches / 6.9 inches)				
Weight	17.5 kg (38.5 lb)				
Operating temperature range	–25°C to +60°C (–13°F to +140°F)				
Noise emission, typical	25 dB(A)				
Self-consumption (at night)	5.0 W				
Topology	Transformerless				
Cooling method	Convection				
Degree of protection (as per IEC 60529)	IP65				
Climatic category (as per IEC 60721-3-4)	4K4H				
Max. permissible value for relative humidity (non-condensing)	100%				
Equipment					
DC connection / AC connection	SUNCLIX / AC connector				
Display via smartphone, tablet, laptop	●				
Interfaces: WLAN / Ethernet / RS485	● / ● / ●				
Communication protocols	Modbus (SMA, Sunspec), Webconnect, SMA Data, TS4-R				
Shade management: OptiTrac Global Peak / TS4-R	● / ○				
Warranty: 5 / 10 / 15 years	● / ○ / ○				
Certificates and approvals (more available upon request)	AS 4777.2, C10/11, CE, CEI 0-21, EN 50438, G59/3-4, G83/2-1, DIN EN 62109 / IEC 62109, NEN-EN50438, IE-EN50438, NT_Ley20.571, ÖVE/ÖNORM E 8001-4-712 & TOR D4, PPDS, PPC, RD1699, TR3.2.1, UTE C15-712, VDE-AR-N 4105, VDE0126-1-1, VFR 2014				
Certificates and approvals (planned)	DEWA, IEC 61727, IEC 62116, MEA, NBR16149, PEA, SI4777, TR3.2.2				
Country availability of SMA Smart Connected	AU, AT, BE, CH, DE, ES, FR, IT, LU, NL, UK				
● Standard features ○ Optional features – Not available Data at nominal conditions Status: 04/2019 1) 4600 W / 4600 VA according to VDE-AR-N 4105 2) AS 4777: 21.7 A					
Type designation	SB3.0-1AV-41	SB3.6-1AV-41	SB4.0-1AV-41	SB5.0-1AV-41	SB6.0-1AV-41



BASIC SYSTEM functions

- Easy commissioning via integrated WLAN and Speedwire interface
- Maximum transparency thanks to visualization in the Sunny Portal / Sunny Places
- Safe investment through SMA Smart Connected
- Modbus as interface for third-party providers

EXPANDED SYSTEM functions

- Basic system functions
- Reduction in purchased electricity and increase in self-consumption through use of stored solar energy
- Maximum energy use thanks to forecast-based charging
- Increased self-consumption thanks to intelligent load control
- Maximum system yield through Smart module technology

With SMA Energy Meter

- Maximum system usage through dynamic limiting of feed-in to the grid between 0% and 100%
- Visualization of energy consumption

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