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SUNNY BOY TL

The Sunny Boy is the ideal solution, especially for demanding PV arrays and partially shaded systems. Enjoy proven technology combined with intelligent ideas. Cutting-edge technology that sets the standard. Concepts you can count on. Details that are simply superior.

Sunny Boy TI

SMA Sunny Boy

Communicative
With direct data exchange with Sunny Places and Sunny Portal

One of the greatest advantages of Webconnect is that data is transmitted directly from the inverter to Sunny Places and Sunny Portal - without the need for additional SMA devices.

- With the integrated Webconnect functions, you only need an Internet connection and a DSL router
- Sunny Places and Sunny Portal provide a clear overview of the PV system data
- Compare PV systems and exchange ideas with other system operators on the Sunny Places

More efficient,
thanks to its 750 V DC input voltage

Electrifying detail: Thanks to the higher, 750 volt maximum DC input voltage, often times one less module string is needed because more

modules can be switched on in a series.

- Highly flexible design reduces cabling requirements
- Maximum efficiency of 97 percent ensures top solar yield

More flexible, thanks to multi-string technology

Greater flexibility in planning, implementing and solar harvest: The advantages of multi-string technology in the new transformerless Sunny Boy are also available in the 3 kW model.

- Optimal yield in partial shading and efficient operation of east/west arrays
- Two MPP trackers with expandable OptiTrac®* Global Peak operational control
- Optional: Single Tracker for complex or simple roof structures or as an add-on to existing PV plants

* Trademark protection is applicable in some countries.

Easier, thanks to innovativ mounting concept

The wall mount has also been redesigned, and now allows you to attach the inverter easily by inserting it from above.

- Fast and professional attachment, even on walls that are not completely straight
- Popular anti-theft protection option available

Universally applicable, thanks to integrated grid management

Intelligent controls offer advantages in every situation: Thanks to its integrated grid management functions, the new Sunny Boy with Reactive Power Control offers universal deployment options and contributes to grid support.

- Fewer disconnections from the grid thanks to voltage reduction via reactive power
- Increased plant profitability

Multilingual, thanks to international graphics characters

The user-friendly graphic display speaks a clear language: The dot matrix display can perfectly present any letter or symbol.

- Current display features Latin and Cyrillic letters as well as Japanese characters
- Upcoming software updates for additional languages such as Thai, Hebrew and Arabic

Low noise, thanks to fanless operation

Sounds good: The new transformerless Sunny Boy works so efficiently that its cooling concept no longer requires the usual fan.

- The device is nearly silent
- Requires less service, saving time and money

SPECIFICATIONS

	SB 3000 TL	SB 3600 TL	SB 4000 TL	SB 5000 TL

DC Input				
Max. DC power (at cos ϕ = 1)	3200 W	3880 W	4200 W	5250 W
Max. input voltage	750 V	750 V	750 V	750 V
Nominal input voltage	400 V	400 V	400 V	400 V
MPP Voltage range	175 to 500 V	175 to 500 V	175 to 500 V	175 to 500 V
Min. Input voltage	125 V	125 V	125 V	125 V
Initial input voltage	150 V	150 V	150 V	150 V
Max. input current. Input A / Input B	15 A / 15 A	15 A / 15 A	15 A / 15 A	15 A / 15 A
Max. input current input A / input B	15 A / 15 A	15 A / 15 A	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	2 / A:2; B:2	2 / A:2; B:2
AC Output				
Rated power at 230 V 50 Hz	3000 W	3680 W	4000 W	4600 W
Max. AC apparent power	3000 VA	3680 VA	4000 VA	5000 VA2
Nominal AC Voltage	220, 230, 240 V	220, 230, 240 V	220, 230, 240 V	220, 230, 240 V
AC voltage range	180 to 280 V	180 to 280 V	180 to 280 V	180 to 280 V
AC power frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Frequency range	-5 to + 5 Hz	-5 to +5 Hz	-5 to +5 Hz	-5 to +5 Hz
Rated voltage and frequency	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz	230 V 50 Hz
Max. output current	16 A	16 A	22 A	22 A
Power factor at rated power	1	1	1	1
Adjustable displacement power factor	0.8 lagging to 0.8 leading			
Feed-in phases / connection phases	1 / 1	1 / 1	1 / 1	1 / 1
Efficiency				
Max. Efficiency	97 %	97 %	97 %	97 %

European efficiency	96 %	96 %	96,4 %	96,5 %
Protective Devices				
Input-side disconnection point	Yes	Yes	Yes	Yes
Ground fault monitoring	Yes	Yes	Yes	Yes
Grid monitoring	Yes	Yes	Yes	Yes
DC reverse polarity protection	Yes	Yes	Yes	Yes
AC short-circuit current capability	Yes	Yes	Yes	Yes
Galvanic isolated	No	No	No	No
All-pole sensitive residual-current monitoring unit	Yes	Yes	Yes	Yes
Protection class according to 62103	I	I	I	I
Overvoltage category according to IEC 60664-1	III	III	III	III
General Data				
Dimensions (W x H x D)	490 x 519 x 185 mm			
Weight	26 Kg	26 Kg	26 Kg	26 Kg
Operating temperature range	-25 °C to 60 °C	-25 °C to 60 °C	-25 °C to 60 °C	-25 °C to 60 °C
Noise emission (typical)	25 dB (A)	25 dB (A)	25 dB (A)	25 dB (A)
Night consumption	1 W	1 W	1 W	1 W
Topology	Transformerless	Transformerless	Transformerless	Transformerless
Cooling method	Convection	Convection	Convection	Convection
Degree of protection according to IEC 60529	IP65	IP65	IP65	IP65
Climatic category according to IEC 60721.3-4	4K4H	4K4H	4K4H	4K4H
Máx. Relative humidity (Non-condensing)	100 %	100 %	100 %	100 %

Features				
DC connection	Sunclix			
AC connection	spring-cage terminal			
Display	Graphic	Graphic	Graphic	Graphic
Interface RS485	Optional	Optional	Optional	Optional
Bluetooth / Speedwire / Webconnect	Yes	Yes	Yes	Yes
Multifunction relay	Optional	Optional	Optional	Optional
Power control module	Optional	Optional	Optional	Optional
Warranty	5 years	5 years	5 years	5 years
Optional warranty extension	10, 15, 20 or 25 years			
Certificates and approvals	AS 4777, C10/11, CE, CEI 0-21, EN 50438[1], G59/3, G83/2, IEC 61727, MEA4, NEN-EN50438, NRS 097-2-1, PEA4, PPC, PPDS, RD1699, RD 661, SI 4777, UTE C15-712, VDE-AR-N 4105, VDE0126-1-1, VFR 2013, VFR 2014			

ACCESORIES

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.

Webconnect

- Ildeally suited for online monitoring of small PV plants with a maximum number of up to four inverters: Webconnect provides free access to Sunny Portal without additional data logger – easily via an existing Internet access and a DSL router.

Speedwire/Webconnect Data Module

- The Speedwire/Webconnect data module is a Speedwire communication interface with Webconnect function for inverters.

Data module with RS485 interface

- The ideal solution for the expansion of existing PV systems that already use RS485 communication. The RS485 interface can be retrofitted and guarantees the proven, cable-based SMA fieldbus communication via RS485 for simple connection to a data logger with a cable length of up to 1,200 meters.

DOWNLOADS

PDF Sunny Boy 1.5 - 2.5 (460.64 KiB)

PDF Sunny Boy 3.0 - 5.0 (566.14 KiB)

PDF Sunny Boy Storage SB25 (452.79 KiB)

PDF Sunny Boy Smart Energy (353.33 KiB)

PDF SMA Tigo TS4 EN (412.73 KiB)

PDF SMA Sunny Boy TL EN (552.85 KiB)

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