

SUNNY BOY 3000TL / 4000TL / 5000TL

SB 3000TL-20 / SB 4000TL-20 / SB 5000TL-20



High Yields

- Maximum efficiency of 97 %
- Multi-String technology*
- Transformerless, with H5 topology
- Shade management with OptiTrac Global Peak

Safe

- Integrated ESS DC switch-disconnector

Simple

- Easily accessible connection area
- Cable connection without tools
- DC plug system SUNCLIX

Communicative

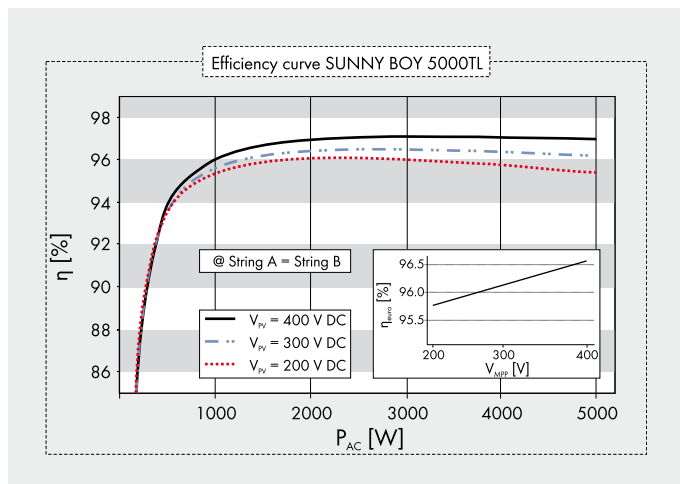
- Bluetooth® technology as standard
- Multilingual graphic display
- Multi-function relay as standard

SUNNY BOY 3000TL / 4000TL / 5000TL

Perfection Plus. Usability. The transformerless Sunny Boy generation

More communicative, easier to use and more efficient than ever: this Sunny Boy is setting new standards in inverter technology. A modern graphic display, readout of daily values even after sunset, simplified installation concept and wireless communication via Bluetooth®. The new Sunny Boys fulfill every wish. With the new OptiTrac Global Peak shade management and an optimal efficiency of 97 %, the inverters ensure optimum solar yield. As transformerless, multi-string devices, the Sunny Boy 4000TL and 5000TL provide maximum flexibility for plant design, and are the first choice for demanding generator designs.

Technical data	Sunny Boy 3000TL	Sunny Boy 4000TL	Sunny Boy 4000TL/V	Sunny Boy 5000TL
Input (DC)				
Max. DC power (@ $\cos \varphi = 1$)	3200 W	4200 W	4200 W	5300 W
Max. DC voltage	550 V	550 V	550 V	550 V
MPP voltage range	188 V - 440 V	175 V - 440 V	175 V - 440 V	175 V - 440 V
DC nominal voltage	400 V	400 V	400 V	400 V
Min. DC voltage / start voltage	125 V / 150 V	125 V / 150 V	125 V / 150 V	125 V / 150 V
Max. input current / per string	17 A / 17 A	2 x 15 A / 15 A	2 x 15 A / 15 A	2 x 15 A / 15 A
Number of MPP trackers / strings per MPP tracker	1 / 2	2 / A: 2, B: 2	2 / A: 2, B: 2	2 / A: 2, B: 2
Output (AC)				
AC nominal power (@ 230 V, 50 Hz)	3000 W	4000 W	3680 W	4600 W
Max. AC apparent power	3000 VA	4000 VA	4000 VA	5000 VA
Nominal AC voltage; range	220, 230, 240 V; 180 - 280 V	220, 230, 240 V; 180 - 280 V	220, 230, 240 V; 180 - 280 V	220, 230, 240 V; 180 - 280 V
AC grid frequency; range	50, 60 Hz; ± 5 Hz	50, 60 Hz; ± 5 Hz	50, 60 Hz; ± 5 Hz	50, 60 Hz; ± 5 Hz
Max. output current	16 A	22 A	22 A	22 A
Power factor ($\cos \varphi$)	1	1	1	1
Phase conductors / connection phases	1 / 1	1 / 1	1 / 1	1 / 1
Efficiency				
Max. efficiency / Euro-eta	97.0 % / 96.3 %	97.0 % / 96.4 %	97.0 % / 96.4 %	97.0 % / 96.5 %
Protection devices				
DC reverse-polarity protection	●	●	●	●
ESS switch-disconnector	●	●	●	●
AC short circuit protection	●	●	●	●
Ground fault monitoring	●	●	●	●
Grid monitoring (SMA Grid Guard)	●	●	●	●
Galvanically isolated / all-pole sensitive fault current monitoring unit	-/●	-/●	-/●	-/●
Protection class / overvoltage category	I / III	I / III	I / III	I / III
General data				
Dimensions (W / H / D) in mm	470 / 445 / 180	470 / 445 / 180	470 / 445 / 180	470 / 445 / 180
Weight	22 kg	25 kg	25 kg	25 kg
Operating temperature range	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Noise emission (typical)	≤ 25 dB(A)	≤ 29 dB(A)	≤ 29 dB(A)	≤ 29 dB(A)
Internal consumption (night)	< 0.5 W	< 0.5 W	< 0.5 W	< 0.5 W
Topology	transformerless	transformerless	transformerless	transformerless
Cooling concept	Convection	OptiCool	OptiCool	OptiCool
Electronics protection rating / connection area (as per IEC 60529)	IP65 / IP54	IP65 / IP54	IP65 / IP54	IP65 / IP54
Climatic category (per IEC 60721-3-4)	4K4H	4K4H	4K4H	4K4H
Features				
DC connection: SUNCLIX	●	●	●	●
AC connection: screw terminal / plug connector / spring-type terminal	-/-/●	-/-/●	-/-/●	-/-/●
Display: text line / graphic	-/●	-/●	-/●	-/●
Interfaces: RS485 / Bluetooth®	○/●	○/●	○/●	○/●
Warranty: 5 / 10 / 15 / 20 / 25 years	●/○/○/○/○	●/○/○/○/○	●/○/○/○/○	●/○/○/○/○
Certificates and permits (more available on request)	CE, VDE 0126-1-1, DK 5940, RD 1663, G83/1-1, PPC, AS4777, EN 50438*, C10/C11, PPDS			
* Does not apply to all national deviations of EN 50438				
● Standard features ○ Optional features – not available				
Data at nominal conditions				
Type designation	SB 3000TL-20	SB 4000TL-20	SB 4000TL-20/V 0159	SB 5000TL-20



Accessories



RS485 interface
DM-485CB-10