

SB 3000TL-21 / SB 4000TL-21 / SB 5000TL-21



**REACTIVE POWER CONTROL**

### Efficient

- Maximum efficiency of 97 %
- Multi-String technology now in the 3-kW version
- Cost savings due to reduced number of parallel strings
- Shade management with OptiTrac Global Peak\*

### Flexible

- Maximum DC input voltage: 750 V
- Integrated grid management functions and reactive power provision

### Simple

- Convection cooling
- Easier wall mounting
- DC plug system SUNCLIX
- Fast connection, no tools required

### Communicative

- Simple country configuration
- Bluetooth® technology as standard
- Multi-function relay as standard

## SUNNY BOY 3000TL / 4000TL / 5000TL with Reactive Power Control

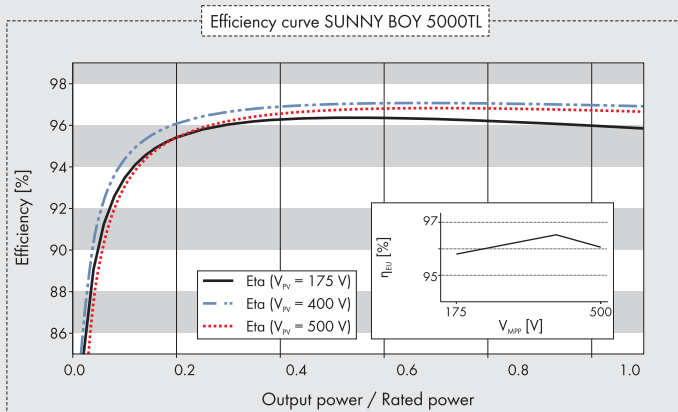
Universal application through integrated grid management functions

The ideal solution particularly for demanding PV arrays and partially shaded plants: as multi-string devices, the new transformerless Sunny Boy 3000TL, 4000TL and 5000TL models offer maximum planning and realization flexibility. The high DC voltage of 750 V proves to be a cost advantage, since fewer parallel strings are required. In addition, the integrated grid management functions make the devices suitable for universal applications and contribute to active grid support. Finally, the new wall mounting system further facilitates installation.

# SUNNY BOY 3000TL / 4000TL / 5000TL

## with Reactive Power Control

Technical Data	Sunny Boy 3000TL	Sunny Boy 4000TL
<b>Input (DC)</b>		
Max. DC power (@ $\cos \varphi = 1$ )	3200 W	4200 W
Max. input voltage	750 V	750 V
MPP voltage range / rated input voltage	175 V - 500 V / 400 V	175 V - 500 V / 400 V
Min. input voltage / start input voltage	125 V / 150 V	125 V / 150 V
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
<b>Output (AC)</b>		
Rated power (@ 230 V, 50 Hz)	3000 W	4000 W
Max. AC apparent power	3000 VA	4000 VA
AC nominal voltage / range	220 V, 230 V, 240 V / 180 V - 280 V	220 V, 230 V, 240 V / 180 V - 280 V
AC grid frequency/range	50 Hz, 60 Hz / -5 Hz ... +5 Hz	50 Hz, 60 Hz / -5 Hz ... +5 Hz
Rated grid 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
Displacement power factor, configurable	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging
Phase conductors/connection phases	1 / 1	1 / 1
<b>Efficiency</b>		
Max. efficiency / European efficiency	97 % / 96 %	97 % / 96.4 %
<b>Protection devices</b>		
Input-side disconnection device	●	●
Ground fault monitoring / grid monitoring	● / ●	● / ●
DC surge arrester (type II), can be integrated	-	-
DC reverse-pole protection / AC short-circuit protection / Galvanically isolated	● / ● / -	● / ● / -
All-pole-sensitive residual current monitoring unit	●	●
Protection class (as per IEC 62103) / Overvoltage category (as per IEC 60644-1)	I/III	I/III
<b>General Data</b>		
Dimensions (W/H/D)	490 / 519 / 185 mm (19.3 / 20.4 / 7.3 inch)	490 / 519 / 185 mm (19.3 / 20.5 / 7.3 inch)
Weight	26 kg / 57.3 lb	26 kg / 57.3 lb
Operation temperature range	-25 °C ... +60 °C / -13 °F ... +140 °F	-25 °C ... +60 °C / -13 °F ... +140 °F
Noise emission (typical)	25 dB(A)	25 dB(A)
Self-consumption (at night)	1 W	1 W
Topology	transformerless	transformerless
Cooling concept	Convection	Convection
Protection rating (as per EN 60529)	IP65	IP65
Connection area protection rating (as per IEC 60529)	IP54	IP54
Climatic category (per IEC 60721-3-4)	4K4H	4K4H
Maximum permissible value for relative humidity, non-condensing	100 %	100 %
<b>Features</b>		
DC connection	SUNCLIX	SUNCLIX
AC connection	Spring terminal	Spring terminal
Display	Graphics	Graphics
Interface: RS485 / Bluetooth	○ / ●	○ / ●
Warranty: 5/10/15/20/25 years	● / ○ / ○ / ○ / ○	● / ○ / ○ / ○ / ○
Multi-function relay	●	●
Certificates and licenses (more available on request)	CE, VDE0126-1-1, C10/11, VDE-AR-N 4105	
Type designation	SB 3000TL-21	SB 4000TL-21



## Accessories



RS485 interface  
DM-485CB-10



Additional fan kit  
FANKIT01-10

- \* 4825 W with VDE-AR-N 4105
- \*\* 4600 VA with VDE-AR-N 4105

● Standard features ○ Optional features – Not available  
Preliminary information – last updated: April 2012  
Data at nominal conditions

## Technical Data

### Input (DC)

Max. DC power (@ $\cos \varphi = 1$ )
Max. input voltage
MPP voltage range / rated input voltage
Min. input voltage / start input voltage
Max. input current input A / input B
Max. input current per string input A / input B
Number of independent MPP inputs / strings per MPP input

### Output (AC)

Rated power (@ 230 V, 50 Hz)
Max. AC apparent power
AC nominal voltage / range
AC grid frequency/range
Rated grid frequency / rated grid voltage
Max. output current
Power factor at rated power
Displacement power factor, configurable
Phase conductors/connection phases

### Efficiency

Max. efficiency / European efficiency
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### Protection devices

Input-side disconnection device
Ground fault monitoring / grid monitoring
DC surge arrester (type II), can be integrated
DC reverse-pole protection / AC short-circuit protection / Galvanically isolated
All-pole-sensitive residual current monitoring unit
Protection class (as per IEC 62103) / Overvoltage category (as per IEC 60644-1)

### General Data

Dimensions (W/H/D)
Weight
Operation temperature range
Noise emission (typical)
Self-consumption (at night)
Topology
Cooling concept
Protection rating (as per EN 60529)
Connection area protection rating (as per IEC 60529)
Climatic category (per IEC 60721-3-4)
Maximum permissible value for relative humidity, non-condensing

### Features

DC connection
AC connection
Display
Interface: RS485 / Bluetooth
Warranty: 5/10/15/20/25 years
Multi-function relay
Certificates and licenses (more available on request)

Type designation

## Sunny Boy 5000TL

5250 W*
750 V
175 V – 500 V / 400 V
125 V / 150 V
15 A / 15 A
15 A / 15 A
2 / A:2; B:2

4600 W
5000 VA**
220 V, 230 V, 240 V / 180 V – 280 V
50 Hz, 60 Hz / –5 Hz ... +5 Hz
50 Hz / 230 V
22 A
1
0.8 leading ... 0.8 lagging
1 / 1

97 % / 96.5 %

●
● / ●
–
● / ● / –
●
I/III

490 / 519 / 185 mm (19.3 / 20.5 / 7.3 inch)
26 kg / 57.3 lb
–25 °C ... +60 °C / –13 °F ... +140 °F
25 dB(A)
1 W
transformerless
Convection
IP65
IP54
4K4H
100 %

SUNCLIX
Spring terminal
Graphics
○ / ●
● / ○ / ○ / ○ / ○ / ○
●
CE, VDE0126-1-1, C10/11, VDE-AR-N 4105

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[www.SunnyPortal.com](http://www.SunnyPortal.com)

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