Economical

- Maximum efficiency of 97%
- Multi-string technology in all power classes
- Cost saving due to fewer parallel strings
- Shade management with OptiTrac Global Peak

Flexible

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

Simple

- Without fan
- Easier wall mounting
- SUNCLIX DC plug-in system
- Fast connection, no tools required

Communicative

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

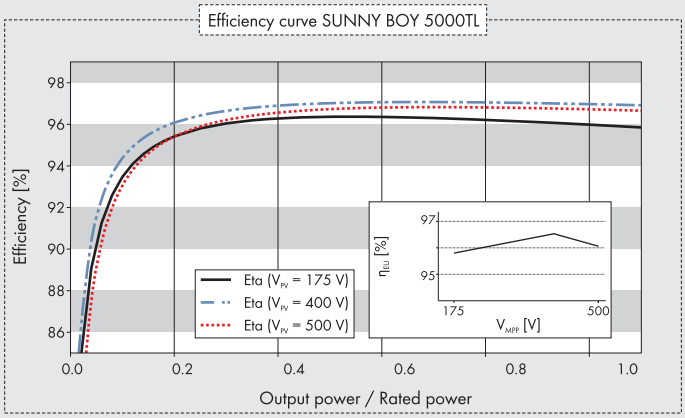
SUNNY BOY 3000TL / 3600TL / 4000TL / 5000TL with Reactive Power Control

The same. Only better. The universally usable Sunny Boy.

It all remains the best: The new transformerless Sunny Boy is the ideal solution, especially for demanding PV arrays and partly shaded plants. Version 20 of the successful Sunny Boy offers a further array of advantages. It's more flexible in its range of applications, provides even more efficient yields, and it's easier to use. 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 allow them to actively support the grid.

SUNNY BOY 3000TL / 3600TL / 4000TL / 5000TL
with Reactive Power Control

Technical data	Sunny Boy 3000TL	Sunny Boy 3600TL
Input (DC)		
Max. DC power (@ cos φ = 1)	3200 W	3880 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 / initial 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
Output (AC)		
Rated power (@ 230 V, 50 Hz)	3000 W	3680 W
Max. apparent AC power	3000 VA	3680 VA
Nominal AC voltage / range	220 V, 230 V, 240 V / 180 V – 280 V	220 V, 230 V, 240 V / 180 V – 280 V
AC power frequency / range	50 Hz, 60 Hz / -5 Hz ... +5 Hz	50 Hz, 60 Hz / -5 Hz ... +5 Hz
Rated power frequency / rated grid voltage	50 Hz / 230 V	50 Hz / 230 V
Max. output current	16 A	16 A
Power factor at rated power	1	1
Displacement power factor, adjustable	0.8 overexcited ... 0.8 underexcited	0.8 overexcited ... 0.8 underexcited
Feed-in phases / connection phases	1 / 1	1 / 1
Efficiency		
Max. efficiency / European weighted efficiency	97 % / 96 %	97 % / 96.3 %
Protective devices		
DC disconnect device	●	●
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 (according to IEC 62103) / overvoltage category (according to IEC 60664-1)	I / III	I / III
General data		
Dimensions (W/H/D)	490 / 519 / 185 mm (19.3 / 20.4 / 7.3 inches)	490 / 519 / 185 mm (19.3 / 20.4 / 7.3 inches)
Weight	26 kg / 57.3 lb	26 kg / 57.3 lb
Operating 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 (night)	1 W	1 W
Topology	Transformerless	Transformerless
Cooling concept	Convection	Convection
Degree of protection (according to IEC 60529)	IP65	IP65
Climatic category (according to IEC 60721-3-4)	4K4H	4K4H
Maximum permissible value for relative humidity (non-condensing)	100 %	100 %
Features		
DC connection / AC connection	SUNCLIX / Spring clamp terminal	SUNCLIX / Spring clamp terminal
Display	Graphic	Graphic
Interface: RS485 / *Bluetooth* / Webconnect / Speedwire[4]	○ / ● / ○ / ○	○ / ● / ○ / ○
Multi-function relay / Power Control Module	○ / ○	○ / ○
Warranty: 5 / 10 / 15 / 20 / 25 years	● / ○ / ○ / ○ / ○	
Certificates and approvals (additional on request)	CE, VDE0126-1-1, VDE-AR-N 4105, UTE C15-712, C10/11, RD1699, RD661, PPDS, PPC, G83/1-1, G59/2, EN50438[1], IEC 61727, PEA, AS 4777, CEI 0-21	
Version: July 2012		
● Standard features ○ Optional features – Not available		
Type designation	SB 3000TL-21	SB 3600TL-21



Accessories

RS485 interface
DM-485CB-10

Webconnect interface with WEBCONDM-10 Speed-wire function

Interface to Speedwire fieldbus SPWDM-10 [4]

Additional fan kit
FANKIT01-10

Multi-function relay
MFR01-10

Power Control Module
PWCMOD-10

[1] Does not apply to all national appendices of EN 50438
[2] 4600 VA with VDE-AR-N-4105 / [3] 4825 W with VDE-AR-N 4105
[4] In planning

Technical data	Sunny Boy 4000TL	Sunny Boy 5000TL
Input (DC)		
Max. DC power (@ cos φ = 1)	4200 W	5250 W[3]
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 / initial 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
Output (AC)		
Rated power (@ 230 V, 50 Hz)	4000 W	4600 W
Max. apparent AC power	4000 VA	5000 VA[2]
Nominal AC voltage / range	220 V, 230 V, 240 V / 180 V – 280 V	220 V, 230 V, 240 V / 180 V – 280 V
AC power frequency / range	50 Hz, 60 Hz / -5 Hz ... +5 Hz	50 Hz, 60 Hz / -5 Hz ... +5 Hz
Rated power frequency / rated grid voltage	50 Hz / 230 V	50 Hz / 230 V
Max. output current	22 A	22 A
Power factor at rated power	1	1
Displacement power factor, adjustable	0.8 overexcited ... 0.8 underexcited	0.8 overexcited ... 0.8 underexcited
Feed-in phases / connection phases	1 / 1	1 / 1
Efficiency		
Max. efficiency / European weighted efficiency	97 % / 96.4 %	97 % / 96.5 %
Protective devices		
DC disconnect device	●	●
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 (according to IEC 62103) / overvoltage category (according to IEC 60664-1)	I / III	I / III
General data		
Dimensions (W/H/D)	490 / 519 / 185 mm (19.3 / 20.4 / 7.3 inches)	490 / 519 / 185 mm (19.3 / 20.4 / 7.3 inches)
Weight	26 kg / 57.3 lb	26 kg / 57.3 lb
Operating 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 (night)	1 W	1 W
Topology	Transformerless	Transformerless
Cooling concept	Convection	Convection
Degree of protection (according to IEC 60529)	IP65	IP65
Climatic category (according to IEC 60721-3-4)	4K4H	4K4H
Maximum permissible value for relative humidity (non-condensing)	100 %	100 %
Features		
DC connection / AC connection	SUNCLIX / Spring clamp terminal	SUNCLIX / Spring clamp terminal
Display	Graphic	Graphic
Interface: RS485 / *Bluetooth* / Webconnect / Speedwire[4]	○ / ● / ○ / ○	○ / ● / ○ / ○
Multi-function relay / Power Control Module	○ / ○	○ / ○
Warranty: 5 / 10 / 15 / 20 / 25 years	● / ○ / ○ / ○ / ○	
Certificates and approvals (additional on request)	CE, VDE0126-1-1, VDE-AR-N 4105, UTE C15-712, C10/11, RD1699, RD661, PPDS, PPC, G83/1-1, G59/2, EN50438[1], IEC 61727, PEA, AS 4777, CEI 0-21	
● Standard features ○ Optional features – Not available		
Type designation	SB 4000TL-21	SB 5000TL-21