



SUNNY BOY 8000TL-US / 9000TL-US / 10000TL-US

SB 8000TLUS-10 / SB 9000TLUS-10 / SB 10000TLUS-10



TRANSFORMERLESS TECHNOLOGY



Efficient

- Maximum efficiency of 98.3%
- Transformerless, with H5 topology

High Yields

- Superior yield with OptiTrac MPP tracking
- OptiCool™ active temperature management

Safe

- SMA Power Balancer for three-phase grid connection
- Integrated DC load disconnect and combiner box
- UL 1741/IEEE-1547 compliant

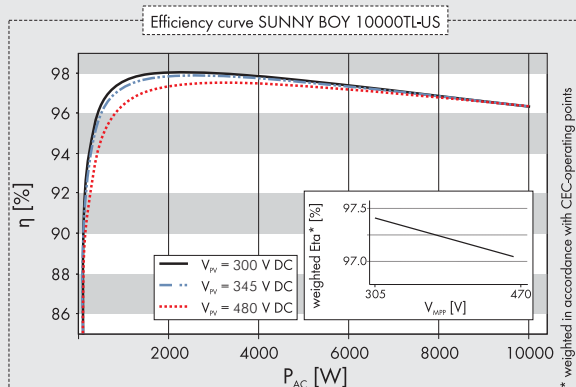
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Transformerless design, maximum yields

The new Sunny Boy TL-US series is UL-listed for North America and features SMA's innovative H5 topology, resulting in superior efficiencies of up to 98 percent and unmatched solar yields. The transformerless design reduces weight, increases the speed of payback and provides optimum value for any decentralized, commercial PV system. The Sunny Boy TL-US series for North America is the ideal choice for mid-size and large plants from 24 kWp up to the megawatt range.

Technical data	Sunny Boy 8000TL-US	Sunny Boy 9000TL-US	Sunny Boy 10000TL-US
	208 V AC	208 V AC	208 V AC
Input (DC)			
Max. recommended PV power (@ module STC)	10000 W	11250 W	12500 W
Max. DC power (@ $\cos \phi = 1$)	8400 W	9400 W	10500 W
Max. DC voltage	600 V	600 V	600 V
DC nominal voltage	345 V	345 V	345 V
MPP voltage range	300 V - 480 V	300 V - 480 V	300 V - 480 V
Min. DC voltage / start voltage	300 V / 360 V	300 V / 360 V	300 V / 360 V
Max. input current / per string (at DC combiner box)	28 A / 28 A	31 A / 31 A	35 A / 35 A
Number of MPP trackers / fused strings per MPP tracker	1 / 6 (@ Combiner Box)	1 / 6 (@ Combiner Box)	1 / 6 (@ Combiner Box)
Output (AC)			
AC nominal power	8000 W	9000 W	10000 W
Max. AC apparent power	8000 VA	9000 VA	10000 VA
Nominal AC voltage / adjustable	208 V / –	208 V / –	208 V / –
AC voltage range	183 V - 229 V	183 V - 229 V	183 V - 229 V
AC grid frequency; range	60 Hz; 59.3 - 60.5 Hz	60 Hz; 59.3 - 60.5 Hz	60 Hz; 59.3 - 60.5 Hz
Max. output current	40 A	44 A	48 A
Power factor ($\cos \phi$)	1	1	1
Phase conductors / connection phases	1 / 2	1 / 2	1 / 2
Harmonics	< 4%	< 4%	< 4%
Efficiency			
Max. efficiency	98.3%	98.3%	98.3%
CEC efficiency	98%	98%	97.5%
Protection devices			
DC reverse-polarity protection	●	●	●
AC short circuit protection	●	●	●
Galvanically isolated / all-pole sensitive monitoring unit	–/●	–/●	–/●
Protection class / overvoltage category	I / IV	I / IV	I / IV
General data			
Dimensions (W / H / D) in mm (in)	470 / 615 / 240 (18.5 / 24 / 9)		
DC Disconnect dimensions (W / H / D) in mm (in)	187 / 297 / 190 (7 / 12 / 7.5)		
Packing dimensions (W / H / D) in mm (in)	390 / 580 / 800 (16 / 23 / 31.5)		
DC Disconnect packing dimensions (W / H / D) in mm (in)	370 / 240 / 280 (15 / 9 / 11)		
Weight / DC Disconnect weight	35 kg (77 lb) / 3.5 kg (8 lb)		
Packing weight / DC Disconnect packing weight	40 kg (88 lb) / 4 kg (9 lb)		
Operating temperature range / full power range	–25 °C ... +60 °C (–13 °F ... +140 °F) / –25 °C ... +45 °C (–13 °F ... +113 °F)		
Noise emission (typical)	≤ 46 dB(A)	≤ 46 dB(A)	≤ 46 dB(A)
Internal consumption at night	≤ 0.25 W	≤ 0.25 W	≤ 0.25 W
Topology	transformerless H5	transformerless H5	transformerless H5
Cooling concept	OptiCool	OptiCool	OptiCool
Electronics protection rating / connection area	NEMA 3R / NEMA 3R	NEMA 3R / NEMA 3R	NEMA 3R / NEMA 3R
Features			
Display: text line / graphic	●/–	●/–	●/–
Interfaces: RS485 / Bluetooth	○/○	○/○	○/○
Warranty: 10 / 15 / 20 years	●/○/○	●/○/○	●/○/○
Certificates and permits (more available on request)	UL1741, UL1998, IEEE 1547, FCC Part 15 (Class A & B), CSA C22.2 No. 107.1-2001		
NOTE: US inverters ship with gray lids.			
● Standard features ○ Optional features – Not available			
Revised August 2010 Data at nominal conditions			
Type designation	SB 8000TLUS-10	SB 9000TLUS-10	SB 10000TLUS-10

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Accessories



Sunny Boy Combiner Box
SBCBT6-10
(Included with inverter)



Bluetooth® Piggy Back
BTPBINV-NR



RS485 interface
485USPB-SMC-NR



SMA Power Balancer
PBL-SBUS-10-NR

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