



SUNNY BOY 3000-US / 3800-US / 4000-US

SB 3000US / SB 3800-US-10 / SB 4000US



ASSEMBLED IN THE USA



UL Certified

- For countries that require UL certification (UL 1741/IEEE 1547)
- Optional integrated AFCI functionality meets the requirements of NEC 2011 690.11

Efficient

- 96.8% peak efficiency
- OptiCool™ active temperature management system

Safe

- Galvanic isolation

Simple

- Patented automatic grid voltage detection*
- Integrated DC disconnect switch

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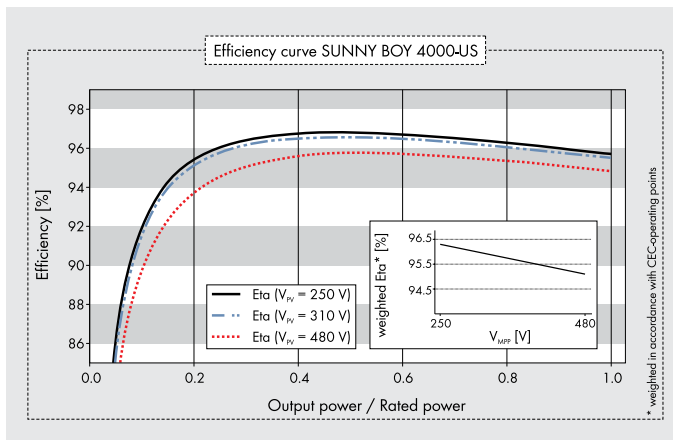
UL certified, reliable system managers

The Sunny Boy 3000-US, 3800-US and 4000-US inverters are specially designed for countries that require UL certification. Automatic grid voltage detection* and an integrated DC disconnect switch simplifies installation, ensuring safety as well as saving time. These models feature galvanic isolation and can be used with all types of modules – crystalline as well as thin-film. The die-cast aluminum enclosure, with the OptiCool active temperature management system, guarantees the highest yields possible and a long service life, even under extreme conditions. The Sunny Boy 3800-US is designed for projects with a current limit of 16A.

* US Patent US7352549B1

Technical data	Sunny Boy 3000-US		Sunny Boy 3800-US	Sunny Boy 4000-US	
	208 V AC	240 V AC	240 V AC	208 V AC	240 V AC
Input (DC)					
Max. recommended PV power (@ module STC)	3750 W		4750 W	4375 W	5000 W
Max. DC power (@ $\cos \phi = 1$)	3200 W		4200 W	4200 W	
Max. DC voltage	500 V		600 V	600 V	
DC nominal voltage	250 V		310 V	310 V	
MPP voltage range	175 - 400 V	200 - 400 V	250 - 480 V	220 - 480 V	250 - 480 V
Min. DC voltage / start voltage	175 / 228 V	200 / 228 V	250 / 285 V	220 / 285 V	250 / 285 V
Max. input current / per string (at DC disconnect)	17 A / 17 A 36 A @ combined terminal		18 A / 18 A 36 A @ combined terminal	18 A / 18 A 36 A @ combined terminal	
Number of MPP trackers / fused strings per MPP tracker	1 / 4 (DC disconnect)				
Output (AC)					
AC nominal power	3000 W		3800 W	3500 W	4000 W
Max. AC apparent power	3000 VA		3800 VA	3500 VA	4000 VA
Nominal AC voltage / adjustable	208 V / ●	240 V / ●	240 V / -	208 V / ●	240 V / ●
AC voltage range	183 - 229 V	211 - 264 V	211 - 264 V	183 - 229 V	211 - 264 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	15 A	13 A	16 A	17 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	96.0%	96.5%	96.8%	96.5%	96.8%
CEC efficiency	95.0%	95.5%	96.0%	95.5%	96.0%
Protection devices					
DC reverse-polarity protection	●		●	●	
Integrated AFCI*	○		○	○	
AC short circuit protection	●		●	●	
Galvanically isolated / all-pole sensitive monitoring unit	●/-		●/-	●/-	
Protection class / overvoltage category	I / III		I / III	I / III	
General data					
Dimensions (W / H / D) in mm (in)	450 / 350 / 235 (18 / 14 / 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 / 470 (15 / 23 / 18.5)				
DC Disconnect packing dimensions (W / H / D) in mm (in)	370 / 240 / 280 (15 / 9 / 11)				
Weight / DC Disconnect weight	38 kg (84 lb) / 3.5 kg (8 lb)				
Packing weight / DC Disconnect packing weight	44 kg (97 lb) / 4 kg (9 lb)				
Operating temperature range (full power)*	-25 °C ... +45 °C (-13 °F ... +113 °F)				
Noise emission (typical)	40 dB(A)		37 dB(A)		37 dB(A)
Internal consumption at night	0.1 W		0.1 W	0.1 W	
Topology	LF transformer		LF transformer	LF transformer	
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 (Second Ed.), UL1998, UL1699B, IEEE 1547, FCC Part 15 (Class A & B), CSA C22.2 No. 1071-2001				
*For AFCI functionality or extended operating temperature range to -40 °C specify SBXXXXUS-12 when ordering.					
● Standard features ○ Optional features - Not available Data at nominal conditions NOTE: US inverters ship with gray lids.					
Type designation	SB 3000US		SB 3800-US-10	SB 4000US	

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Accessories



RS485 interface
485USPB-NR



Bluetooth Piggy-Back
BTPBINV-NR
with External Antenna
BTPB-EXTANT-NR



Combi-Switch
DC disconnect and PV
array combiner box
COMBO-SWITCH



Combiner Box
Simplify wiring for added
convenience and safety
SBCB-6-3R or SBCB-6-4