SUNNY BOY 3.0-US / 3.8-US / 5.0-US / 6.0-US / 7.0-US / 7.7-US





Value-Added Improvements

- Superior integration with SMA's MLPE Power+ Solution
- World's first Secure Power Supply* now offers up to 2,000 W
- Full grid management capabilities ensure a utility-compliant solution for any market

Reduced Labor

- New Installation Assistant with direct access via smartphone minimizes time in the field
- Integrated disconnect simplifies equipment stocking and speeds installation

Unmatched Flexibility

- SMA's proprietary OptiTracTM
 Global Peak technology mitigates
 shade with ease
- Multiple independent MPPTs accommodate hundreds of stringing possibilities

Trouble-Free Servicing

- Two-part enclosure concept allows for simple, expedited servicing
- Enhanced AFCI technology reduces false tripping while improving sensitivity in real arcs

SUNNY BOY 3.0-US / 3.8-US / 5.0-US / 6.0-US / 7.0-US / 7.7-US

Reduce costs across your entire residential business model

The residential PV market is changing rapidly. Your bottom line matters more than ever—so we've designed a superior residential solution to help you decrease costs at every stage of your business operations. The Sunny Boy 3.0-US/3.8-US/5.0-US/6.0-US/7.0-US/7.7-US join the SMA lineup of field-proven solar technology backed by the world's #1 service team, along with a wealth of improvements. Simple design, improved stocking and ordering, value-driven sales support and streamlined installation are just some of the ways that SMA helps your business operate more efficiently. And, Sunny Boy's superior integration with the innovative Power+ Solution means installers have even more flexibility in addressing their toughest challenges.

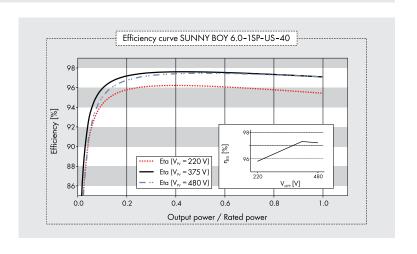
Technical data	Sunny Boy 3.0-US		Sunny Boy 3.8-US		Sunny Boy 5.0-US				
	208 V	240 V	208 V	240 V	208 V	240 V			
Input (DC)									
Max. usable DC power	3100 W	3100 W	3450 W	4000 W	5150 W	5150 W			
Max. DC voltage			600 V 195 - 480 V						
Rated MPP voltage range	155 -	480 V	220 - 480 V						
MPPT operating voltage range	100 - 550 V								
Min. DC voltage / start voltage	100 V / 125 V								
Max. operating input current per MPPT				PΑ					
Max. short circuit current per MPPT	18 A								
Number of MPPT tracker / string per MPPT tracker	2/1				3 / 1				
Output (AC)									
AC nominal power	3000 W	3000 W	3330 W	3800 W	5000 W	5000 W			
Max. AC apparent power	3000 VA	3000 VA	3330 VA	3800 VA	5000 VA	5000 VA			
Nominal voltage / adjustable	208 V / ●	240 V / ●	208 V / ●	240 V / ●	208 V / ●	240 V / •			
AC voltage range	183 - 229 V	211 - 264 V	183 - 229 V	211 - 264 V	183 - 229 V	211 - 264			
AC grid frequency			60 Hz / 50 Hz						
Max. output current	14.5 A	12.5 A	16.0 A	16.0 A	24.0 A	24.0 A			
Power factor (cos φ)				1					
Output phases / line connections	1/2								
Harmonics	< 4 %								
Efficiency									
Max. efficiency	97.2 %	97.6 %	97.2 %	97.5 %	97.2 %	97.5 %			
CEC efficiency	96 %	96.5 %	96.5 %	96.5 %	96.5 %	97 %			
Protection devices						,,,,,			
DC disconnect device				•					
DC reverse polarity protection									
Ground fault monitoring / Grid monitoring									
AC short circuit protection				Ť					
All-pole sensitive residual current monitoring unit (RCMU)				•					
Arc fault circuit interrupter (AFCI)				Ĭ					
Protection class / overvoltage category	I / IV								
General data			'/						
Dimensions (W / H / D) in mm (in)			525 720 100	101 1 20 5 7 0\					
Packaging dimensions (W / H / D) in mm (in)	535 x 730 x 198 (21.1 x 28.5 x 7.8) 600 x 800 x 300 (23.6 x 31.5 x 11.8)								
Weight / packaging weight	26 kg (57 lb) / 30 kg (66 lb)								
Operating temperature range	- 25°C+60°C								
Noise emission (typical)	39 dB(A)								
Internal power consumption at night	< 5 W								
Topology	Transformerless								
Cooling concept	Convection								
Features			CONV						
Ethernet ports				2					
Secure Power Supply				*					
Display (2 x 16 characters)									
WLAN									
				1 0					
Sensor module / External WLAN antenna	o/o ●/o/o								
Warranty: 10 / 15 / 20 years		11 111 1000 111 140		•	CANL/CCA VOC 2	10711			
Certificates and approvals				Part 15 (Class A & B)					
 Standard features — Optional features — Not a 	vallable Data at n	ominal conditions	NOTE: US inverters s	hip with gray lids. '	Not tunctional with	rower+ Solution			

Accessories









Technical data	Sunny Boy 6.0-US		Sunny Boy 7.0-US		Sunny Boy 7.7-US				
	208 V	240 V	208 V	240 V	208 V	240 V			
Input (DC)									
Max usable DC power	5400 W	6200 W	6900 W	7200 W	6900 W	7950 W			
Max. DC Voltage			600 V 245 - 480 V						
Rated MPP Voltage range	220 -	480 V	270 - 480 V						
MPPT operating voltage range	100 – 550 V								
Min. DC voltage / start voltage	100 V / 125 V								
Max. operating input current per MPPT	10 A								
Max. short circuit current per MPPT			18	8 A					
Number of MPPT tracker / string per MPPT tracker			3	/ 1					
Output (AC)									
AC nominal power	5200 W	6000 W	6660 W	7000 W	6660 W	7680 W			
Max. AC apparent power	5200 VA	6000 VA	6660 VA	7000 VA	6660 VA	7680 VA			
Nominal voltage / adjustable	208 V / ●	240 V / ●	208 V / ●	240 V / ●	208 V / ●	240 V / ●			
AC voltage range	183 - 229 V	211 - 264 V	183 - 229 V	211 - 264 V	183 - 229 V	211 - 264			
AC grid frequency			60 Hz	/ 50 Hz					
Max. output current	25.0 A	25.0 A	32.0 A	29.2 A	32.0 A	32.0 A			
Power factor (cos φ)				1					
Output phases / line connections	1/2								
Harmonics	< 4 %								
Efficiency									
Max. efficiency	97.2 %	97.6 %	97.1 %	97.5 %	97.1 %	97.5 %			
CEC efficiency	96.5 %	97 %	96.5 %	97 %	96.5 %	97 %			
Protection devices		77 70			7 212 72				
DC disconnect device				•					
DC reverse polarity protection				•					
Ground fault monitoring / Grid monitoring				•					
AC short circuit protection				•					
All-pole sensitive residual current monitoring unit (RCMU)				•					
Arc fault circuit interrupter (AFCI)				<u> </u>					
Protection class / overvoltage category	• 								
General data			' /	I V					
Dimensions (W / H / D) in mm (in)			525 720 100	121 1 20 5 7 0\					
Packaging Dimensions (W / H / D) in mm (in)	535 x 730 x 198 (21.1 x 28.5 x 7.8)								
• •	600 x 800 x 300 (23.6 x 31.5 x 11.8)								
Weight / packaging weight Operating temperature range	26 kg (57 lb) / 30 kg (66 lb) - 25°C+60°C								
	20 -	JB(A)	- 25 C		ID/A)				
Noise emission (typical)	39 0	зь(А)	45 dB(A)						
Internal power consumption at night									
Topology	_	1*	Transfo	rmerless					
Cooling concept	Conv	ection		F	an				
Features				0					
Ethernet ports				2					
Secure Power Supply				•*					
Display (2 x 16 characters)				•					
WLAN				•					
Sensor module / External WLAN antenna				/ 0					
Warranty: 10 / 15 / 20 years			•	0/0					
Certificates and approvals				Part 15 (Class A & B)					
 Standard features — Optional features — Not av 	railable Data at n	ominal conditions	NOTE: US inverters s	hin with aray lids 3	Not functional with	Power+ Solution			

POWER+ SOLUTION

The SMA Power+ Solution combines legendary SMA inverter performance and intelligent DC module-level electronics in one cost-effective, comprehensive package. This means that you can achieve maximum solar power production for your customers while also realizing significant installation savings.

Unlike conventional microinverter and DC optimizer systems, Power+ is faster to install, provides more flexibility, boasts logistical advantages, and reduces service risk.

Visit www.SMA-America.com for more information.







SIMPLE, FLEXIBLE DESIGN

Speed the completion of customer proposals and maximize the efficiency of your design team with the Sunny Boy-US series, which provides a new level of flexibility in system design by offering:

- » Hundreds of stringing configurations and multiple independent MPPTs
- » SMA's proprietary OptiTrac™ Global Peak shade mitigation technology
- » Diverse application options including on- and off-grid compatibility



VALUE-DRIVEN SALES ENABLEMENT

SMA wants to enable your sales team by arming them with an abundance of feature/benefit support. Show your customers the value of the Sunny Boy-US series by utilizing:

- » Secure Power Supply, now with 2,000 W of opportunity power in the event of a grid outage, as an increased value-add or upsell opportunity
- » SMA's 35 year history and status as the #1 global inverter manufacturer instills homeowners with peace of mind and the long-term security they demand from a PV investment
- » An economical solution for shade mitigation and the challenges of complex roofs



IMPROVED STOCKING AND ORDERING

Ensure that your back office business operations run smoothly and succinctly while mitigating potential errors. The Sunny Boy-US series can help achieve cost savings in these areas by providing:

- » An integrated DC disconnect that simplifies equipment stocking and allows for a single inverter part number
- » All communications integrated into the inverter, eliminating the need to order additional equipment



STREAMLINED INSTALLATION AND COMMISSIONING

Expedite your operations in the field by taking advantage of the new Sunny Boy's installer-friendly feature set including:

- » Direct access via smartphone and utilization of SMA's Installation Assistant, which minimizes time/labor spent in the field and speeds the path to commissioning
- » Improved communication-no need to install additional equipment
- » Integrated DC disconnect that simplifies onsite logistics and eliminates the need to install a separate disconnect unit, speeding overall installation time



SUPERIOR SERVICE

SMA understands the factors that contribute to lifetime PV ownership cost, that's why the Sunny Boy-US series was designed for maximum reliability and backstopped by an unmatched service offering. Benefit from:

- » The new Sunny Boy's two-part enclosure concept that separates the connection unit from the power unit, which allows for simple, expedited servicing
- » The #1 service team in the PV industry, as recognized by IMS research, with experience servicing an installed base of more than 55 GW