



# SUNNY BOY 5.0-US / 6.0-US

SB 5.0-1SP-US-40 / SB 6.0-1SP-US-40



## Improved

- Now featuring Secure Power Supply with up to 2,000 W
- Full grid management capabilities

## Simplified

- Installation assistant minimizes time in the field
- Integrated disconnect simplifies equipment stocking and speeds installation

## Flexible

- Hundreds of stringing configurations
- Diverse application options including on-grid and off-grid

## Innovative

- Two-part enclosure concept allows for simple, expedited servicing
- Direct access via smartphone or tablet streamlines installation

## SUNNY BOY 5.0-US/6.0-US

A new standard in value

The Sunny Boy 5.0-US/6.0-US join the SMA lineup of field-proven solar technology backed by the world's #1 service team, along with a wealth of improvements. The world's first Secure Power Supply now delivers up to 2,000 W of opportunity power when the grid goes down and the sun is shining. Installation has never been easier thanks to SMA's installation assistant, direct access via smartphone, and integrated DC disconnect. SMA's latest series of residential inverters are once again raising the bar by offering superior performance, enhanced features, and installation simplicity.

Technical data	Sunny Boy 5.0-US		Sunny Boy 6.0-US	
	208 V	240 V	208 V	240 V
<b>Input (DC)</b>				
Max usable DC power	5300 W	5300 W	5500 W	6300 W
Max. DC Voltage	600 V			
Rated MPP Voltage range	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	10 A			
Number of MPPT tracker / string per MPPT tracker	3 / 1			
<b>Output (AC)</b>				
AC nominal power	5000 W	5000 W	5200 W	6000 W
Max. AC apparent power	5000 VA	5000 VA	5200 VA	6000 VA
Nominal voltage / adjustable	208 V / ●	240 V / ●	208 V / ●	240 V / ●
AC voltage range	183 - 229 V	211 - 264 V	183 - 229 V	211 - 264 V
AC grid frequency	60 Hz / 50 Hz			
Max. output current	24.0 A	24.0 A	25.0 A	25.0 A
Power factor (cos φ)	1			
Output phases / line connections	1 / 2			
Harmonics	< 4 %			
<b>Efficiency</b>				
Max. efficiency	> 97 %			
CEC efficiency	TBD			
<b>Protection devices</b>				
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)	●			
Protection class / overvoltage category	I / IV			
<b>General data</b>				
Dimensions (W / H / D) in mm (in)	535 x 730 x 198 (21.1 x 28.5 x 7.8)			
Packaging Dimensions (W / H / D) in mm (in)	600 x 800 x 300 (23.6 x 31.5 x 11.8)			
Weight	26 kg (57 lb)			
Packaging weight	30 kg (66 lb)			
Operating temperature range	- 25 °C ... +60 °C			
Noise emission (typical)	< 25 dB(A)			
Internal power consumption at night	< 5 W			
Topology	transformerless			
Cooling concept	convection			
<b>Features</b>				
Secure power supply	●			
Display (2 x 16 characters)	●			
Interfaces: Ethernet / WLAN	● / ●			
Sensor module / External WLAN antenna	○ / ○			
Warranty: 10 / 15 / 20 years	● / ○ / ○			
Certificates and approvals	UL 1741, UL 1998, UL 1699B, IEEE1547, FCC Part 15 (Class A & B), CAN/CSA V22.2 107.1-1			

● Standard features ○ Optional features – Not available Data at nominal conditions NOTE: US inverters ship with gray lids.

Type designation SB 5.0-1SP-US-40 SB 5.0-1SP-US-40 SB 6.0-1SP-US-40 SB 6.0-1SP-US-40

**Accessories**



Sensor module  
MD.SEN-US-40



External WLAN antenna  
EXTANT-US-40

