



SUNNY BOY 5.0-US / 6.0-US

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

**WORLD'S FIRST
SECURE POWER SUPPLY**



OUTLET NOT INCLUDED

Value-Added Improvements

- World's first Secure Power Supply now offers up to 2,000 W
- Full grid management capabilities ensures 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 OptiTrac™ 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, greatly reducing unneeded service calls

SUNNY BOY 5.0-US/6.0-US

Reduce costs across your entire residential business model

The residential PV market is changing rapidly, and we understand that your bottom line matters more than ever. That's why we've designed a superior residential solution that will help you decrease costs throughout all stages of your business operations. 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. Simple design, improved stocking and ordering, value driven sales support and streamlined installation are just some of the ways that SMA is working to help your business operate more efficiently.

Technical data	Sunny Boy 5.0-US		Sunny Boy 6.0-US	
	208 V	240 V	208 V	240 V
Input (DC)				
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			
Output (AC)				
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 %			
Efficiency				
Max. efficiency	97.2 %	97.5 %	97.2 %	97.6 %
CEC efficiency	96.5 %	97 %	96.5 %	97 %
Protection devices				
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			
General data				
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			
Features				
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

● 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

