

# Sunny Boy 2500U



The leading grid-tied photovoltaic inverters in Europe and America

UL 1741 Listed  
for grid  
interactive  
inverters

5-year  
comprehensive  
warranty  
standard

Rugged NEMA  
4X stainless steel  
outdoor  
enclosure  
standard

Exceptional  
reliability  
and energy  
capture ratio

Easy to install  
three-point  
mounting system

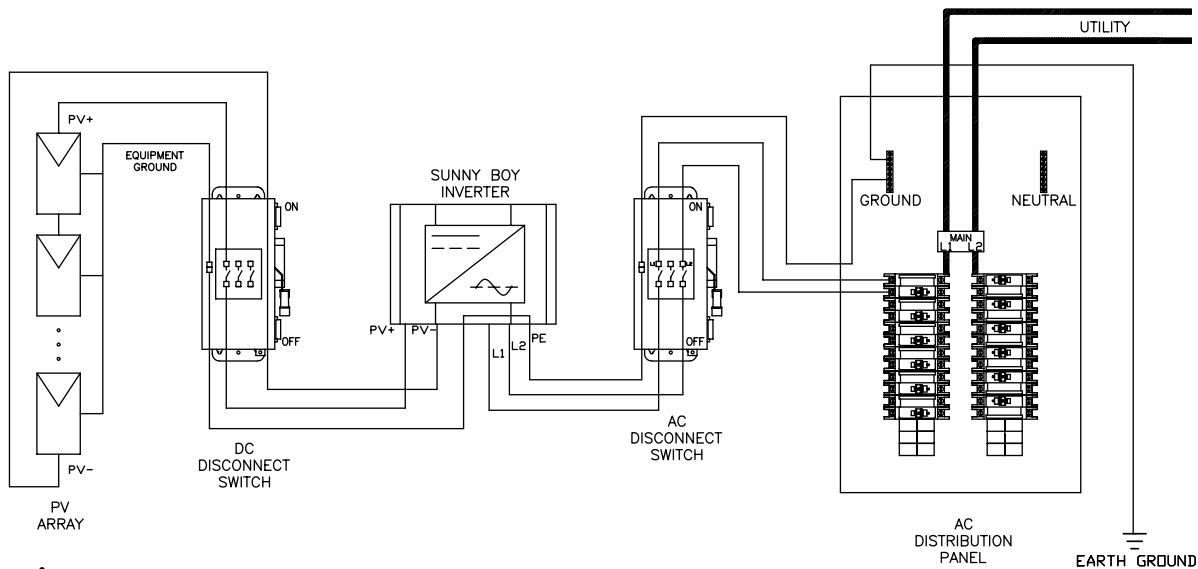
Comprehensive  
communications  
and data  
collection  
options

SMA's Modular  
String inverter  
design is  
expandable to  
virtually any  
system size



Shown with optional display

The SMA Sunny Boy inverter, the most popular grid-tied photovoltaic inverter in Europe, is now UL 1741 Listed and available in North America. Sunny Boy's extensive track record in some of the world's most demanding markets has made it a favorite among PV professionals everywhere. Over 80,000 Sunny Boy inverters have been installed worldwide. Having achieved the highest reliability of any PV inverter, Sunny Boy gained immediate acceptance in the US and Canadian markets. Superior design, rock-solid German engineering, and exceptional real-world efficiency have made Sunny Boy the top choice for American solar designers. These professionals know that Sunny Boy is a grid-tied inverter that they can recommend without reservation and install with confidence.



## Specifications

<b>Inverter Technology</b>	Real sine-wave, current source, high frequency PWM
<b>AC Input Voltage</b>	211–264 (240 V AC) or 183–229 (208 V AC)
<b>AC Input Frequency</b>	59.3–60–60.6 (60 Hz), 50 Hz also
<b>DC Input Voltage</b>	250–600 V DC
<b>Peak Power Tracking Voltage</b>	234–550 V DC (at 240 V AC)
<b>Minimum DC Input Voltage</b>	207–256 V dependent on available line voltage
<b>Maximum AC Power Output</b>	2500 W (240 V AC), 2200 W (208 V AC)
<b>Current THD</b>	Less than 4%
<b>Power Factor</b>	Unity
<b>Peak Inverter Efficiency</b>	93%–94.4%
<b>Cooling</b>	Convection cooling (no fan)
<b>PV Start Voltage</b>	300 Vdc
<b>Maximum AC Current</b>	10.4 A
<b>Maximum DC Current</b>	13 A
<b>DC Voltage Ripple</b>	Less than 5%
<b>Power Consumption</b>	0 W nighttime, < 0.25 W standby
<b>Ambient Temperature</b>	-25 °C ... +60 °C
<b>Enclosure</b>	NEMA 4X stainless steel
<b>Size</b>	434 W x 295 H x 214 D mm
<b>Weight</b>	32 kg
<b>Certifications</b>	United States: UL 1741, E210376, UL 1998, IEEE 519, IEEE 929 ANSI C62.41 C1 & C3, FCC part 15 A&B International: DIN EN50082 Part 1, 61000-32, 50081, 50014, 600055 Part 2, 55011 Group 1 Class B, 50178, 60146 Part 1-1



Sunny Boy's unsurpassed reliability and efficiency is the result of SMA's manufacturing philosophy that combines simple design with robust execution. SMA's state-of-the-art maximum power point tracking performance results in greater real-world energy capture than any other grid-tied PV inverter. Sunny Boy's safety and reliability record is also exceptional due, in part, to the inverter's redundant grid monitoring and built-in ground fault detection and interruption protection. The inverter's IGBT power stage generates a nearly perfect sine wave with the lowest harmonic distortion in the industry and meets new ultra-strict FCC EMC standards. SMA's unique String Inverter technology makes future system expansion simple. Sunny Boy's optional power line carrier communication capability allows for extensive data acquisition from one or many inverters with no additional wiring. (Optional powerline modem required.) Other communication options are available to satisfy almost any application.

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Advanced System Technology for  
the Successful Photovoltaic Future

