

# Sunny Boy™ 3800U



*Introducing the latest addition to the SMA line of Sunny Boys*



**Exceptional efficiency**

**Outstanding reliability and energy capture ratio**

**LCD display included**

**5-year comprehensive warranty - extended warranty available**

**Rugged cast aluminum outdoor rated enclosure**

**Easy to install integrated wall mount bracket system**

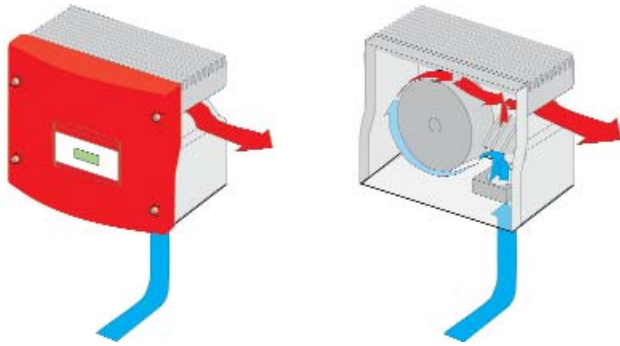
**Compatible with the SMA family of communications and data collection options**

**Very quiet operation**

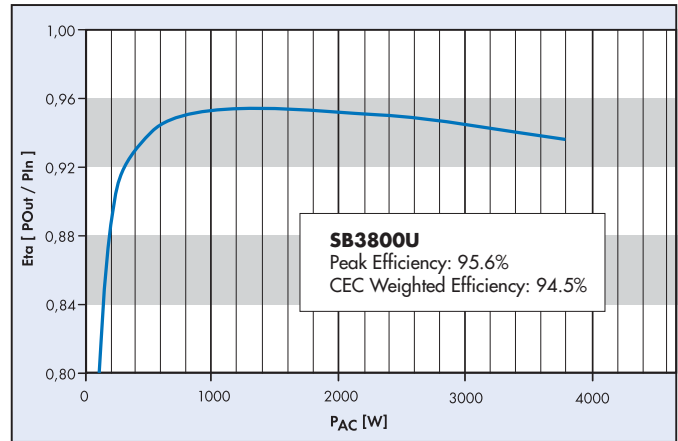
**ETL Listed to UL 1741**

Introducing the latest addition to the Sunny Boy Family: the new Sunny Boy 3800U PV inverter. Over two decades of engineering experience has culminated with the creation of the SB3800U. Its new cast aluminum enclosure means lighter weight and better heat transfer for sensitive components. New construction and design techniques allow SMA to set the bar even higher when it comes to real-world efficiency and overall reliability. The new silver color and near silent operation will please even the most particular users. The new SB3800U, evidence that the pioneering spirit is alive and well at SMA.





New Opticool™ airflow design.



SMA's new 3800 watt inverter processes solar energy at an unparalleled 95.6% efficiency and is the first of a new generation of inverters by SMA to be released in America. These new inverters incorporate a cast aluminum housing used to separate the control and power electronics. This new chassis design is incredibly rugged, lightweight and weatherproof. The power electronics compartment integrates SMA's new Opticool™ airflow technology where cool air is drawn in through the bottom of the enclosure by convection, drawn around the power electronics where the air absorbs heat and is then released through a side vent. When required, this process is assisted by a temperature controlled fan. The built in meter displays system status as well as the solar energy being produced by the power plant and other key information on the LCD screen. Several meter and software options are available from your SMA supplier.

## Specifications

Inverter Technology	Real sine-wave, current source, high frequency PWM	Peak Inverter Efficiency	95.6%
AC Input Voltage	183 - 229 (208 V) 211 - 264 (240 V)	CEC Weighted Efficiency	94.5%
AC Input Frequency	59.3 - 60.5 (60 Hz)	Cooling	Forced, convection
AC Maximum Output Power @ 45°C	3800W @ 240 VAC 3500W @ 208 VAC	Power Consumption	0.1 W nighttime <7 W in operation
AC Maximum Output Current	16 AAC	Ambient Temperature Rating	Up to 45°C (113°F) ambient at 3800W output power Up to 60°C (140°F) ambient at reduced power
DC Maximum Input Voltage	500 VDC	Enclosure	NEMA 3R
DC MPPT Voltage Range	200 - 400 VDC @ 240 VAC 180 - 400 VDC @ 208 VAC	Dimensions	17.8W x 13.8H x 9.3D in. (452W x 351H x 236D mm)
DC Voltage Ripple	<10%	Weight	85 lb. (38.4 kg.)
DC Maximum Input Current	20 ADC	Shipping Weight	98 lb. (44.5 kg.)
PV Start Voltage (Adjustable)	264 VDC @ 240 VAC 229 VDC @ 208 VAC	Compliance	UL 1741, E210376, IEEE 519, IEEE 929, FCC Part 15 A & B
Maximum Recommended PV Power	4800 Wp		
Max. PV Array Short Circuit Current	34 ADC		
Current THD	<3%		
Power Factor	> 0.99 @ nominal power		