

# Windy Boy



*The leading grid-tied inverter is now available for wind applications*



UL 1741 Listed for grid interactive inverters

5-year comprehensive warranty

Rugged NEMA 4X stainless steel outdoor enclosure standard

Exceptional reliability and it works without batteries or charge controllers

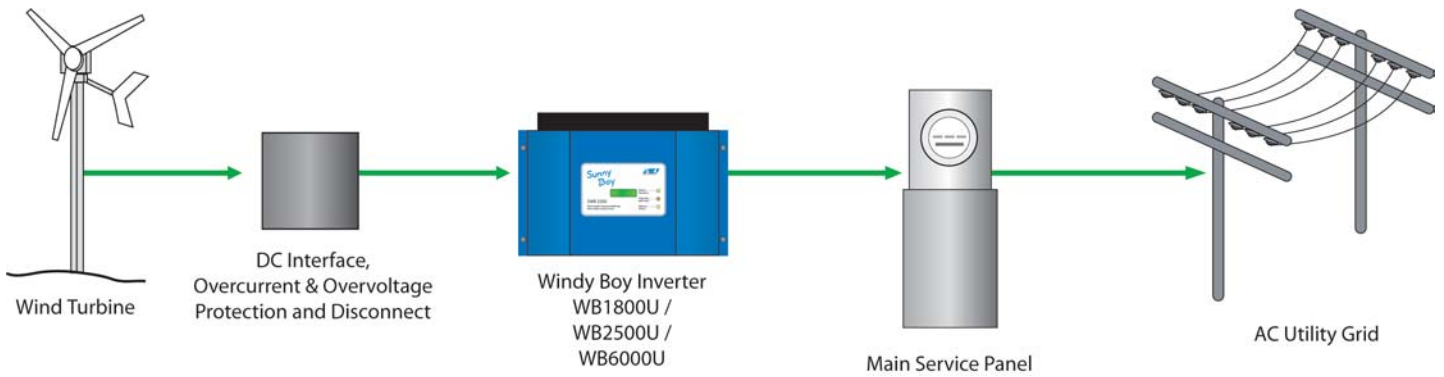
Nearly twice the energy capture ratio of systems with batteries

Easy to install 3-point wall mounting system

Comprehensive communication and data collection options

The Windy Boy incorporates the same proven technology used in all Sunny Boy inverters with special firmware that permits direct grid-tie operation with compatible wind turbines - without batteries. The Windy Boy is available in 1800W, 2500W and 6000W models for increased system sizing versatility. Contact your local wind turbine supplier for information on compatible wind turbine models and system design considerations.





The Windy Boy is able to be connected to any wind turbine with a three phase, rectified DC output within the operating ranges of the inverter. Multiple Windy Boy inverters can be paralleled for larger turbines. Each turbine manufacturer pre-configures the inverter for optimum operation with their specific wind turbine. Historically, grid-tied wind systems have been connected to the grid through charge controllers, batteries and inverter/chargers. The resulting total efficiency of the power conversion from the wind turbine to the grid can be as low as 50%. With the Windy Boy, the peak efficiency is the same as the Sunny Boy PV models. For example, when using a 2500W Windy Boy the efficiency can be as high as 94.5%. The overall system cost is also greatly reduced because components such as the charge controller, batteries and associated switch gear can be eliminated from the system. Increased total energy capture combined with a reduction of balance of system components greatly reduces the installation and operating costs of a grid-tied wind system. Without inverter settings, battery setpoints or batteries to maintain or replace, Windy Boy systems are greatly simplified and virtually maintenance free. Please contact your wind turbine manufacturer or distributor for pricing, availability and additional information on using wind turbines with the Windy Boy.

## Specifications

Parameter	WB1800U-120	WB2500U-208	WB2500U-240	WB6000U-240/277	WB6000U-208
Max. DC Input Voltage	400 VDC	600 VDC	600 VDC	600 VDC	600 VDC
Max. DC Fuse Required	15 ADC, 600 VDC	15 ADC, 600 VDC	15 ADC, 600 VDC	40 ADC, 600 VDC	30 ADC, 600 VDC
Max. DC Input Power	2000 WDC	2300 WDC	2800 WDC	6400 WDC	5600 WDC
Max. Allowable DC Ripple	< 5% Peak to Peak	< 5% Peak to Peak	< 5% Peak to Peak	< 5% Peak to Peak	< 5% Peak to Peak
Nom. DC Operating Voltage	139* - 400 VDC	204* - 550 VDC	233* - 550 VDC	250* - 600 VDC	250* - 600 VDC
Max. DC Operating Current	12 ADC	13 ADC	13 ADC	25 ADC	25 ADC
Max. DC Short Circuit Current	18 ADC	18 ADC	18 ADC	35 ADC	35 ADC
Max. AC Current Protection	20 AAC	15 AAC	15 AAC	40 ADC	30 ADC
Nom. AC Output Voltage	120 VAC	208 VAC	240 VAC	240/277 VAC	208 VAC
Nom. AC Operating Voltage	106 - 132 VAC	183 - 228 VAC	211 - 264 VAC	211-264/244-304 VAC	183 - 228 VAC
Nom. AC Frequency	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
Nom. AC Operating Freq.	59.3 - 60.5 Hz	59.3 - 60.5 Hz	59.3 - 60.5 Hz	59.3 - 60.5 Hz	59.3 - 60.5 Hz
Max. AC Output Current	17 AAC	12 AAC	12 AAC	25 AAC	25 AAC
Max. AC Output Power	1800 WAC	2100 WAC	2500 WAC	6000 WAC	5200 WAC
Harmonic Distortion I <sub>THD</sub>	< 4%	< 4%	< 4%	< 3%	< 3%
Power Factor	Fixed, Unity	Fixed, Unity	Fixed, Unity	Fixed, Unity	Fixed, Unity
Tare Loss	0.25 W	0.25 W	0.25 W	0.25 W	0.25 W

\*Line voltage dependent, see Technical Description for appropriate inverter

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