



# Blender 2500

## 24/7 Power Blending

*Providing constant power from a solar array and the power grid 24 hours a day, 7 days a week*

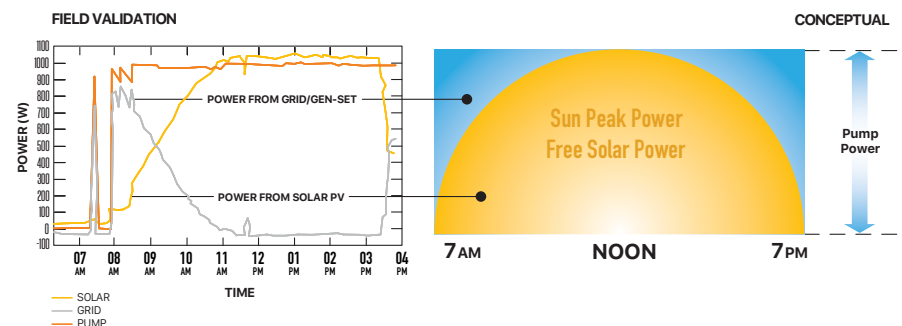


As the name implies, the Blender seamlessly blends energy between a solar array and the power grid. It is ideally suited for applications that require 24/7 or some nighttime operation, particularly in areas with high energy costs. The Blender represents a cost effective way to intelligently supplement solar power with controllable nighttime operation without the expense of adding batteries.

During full solar irradiance, the Blender will draw maximum power from the PV array. As cloud cover or impending darkness reduce the level of solar irradiance, the system automatically makes up the difference by drawing from the grid. Once it is dark, the system can draw all of its power from the grid. In high energy cost areas this allows for both power firming during the day and full nighttime operation while consuming as little power from the grid as possible.

Typical applications include swimming pool pumps, well pumps, solar decorative fountains, aerators and waste water treatment systems.

- Runs installed or new AC motor/pump/compressor with free solar power
- Intelligently blends energy input from solar PV and power grid
- Maintains full power 24/7 while minimizing power costs
- Simple installation, weatherproof, durable and automatic
- No circuit panel installation required, plugs in as simple outlet load
- Universal compatibility single/three-phase, 50/60Hz, 120/240Vac
- Maintains full variable frequency drive (VFD) operation while blending inputs
- Corrects poor quality grid power/voltage
- Patented and made in the USA



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Intelligently supplement  
solar power demands

### NEW AND IMPROVED FEATURES

- 2 digital and 2 analog inputs
- Multiple DIP switches for feature selection in the field, including min. Hz limit
- Integrated load filters
- Integrated Bluetooth for smartphone app connectivity
- Optional GFCI protection

### MODES OF OPERATION

**Blended Mode:** In this mode the system utilizes as much power as is available from the solar array at any instant, supplementing as needed from the power grid as clouds come over or day fades to night.

**Solar-Only Mode:** By activating the switch to manually override the use of the power grid the system can be easily put into a mode where it will not draw power from the grid. This is typically used to optimize the cost of operation based on different seasonal needs.

**Timed-Grid Mode:** Sometimes it is only necessary to run a device for certain times at night, perhaps until a facility closes or periodically during the night to drive devices like aerators or filters. This mode provides complete flexibility in the scheduling of the use of grid power.



### Technical Specifications

#### ELECTRICAL

AC input voltage range:	120-240Vac single phase
AC input maximum current:	12Aac
Solar PV operating voltage range:	100-400Vdc
Solar PV rated current:	12Adc
Certification:	UL 61800-5-1 standard

#### MECHANICAL

Degree of protection:	NEMA3R/IP65
Enclosure material:	Cast Aluminum
Operating temperature:	-40°C to 50°C
Dimensions:	18"x10"x5"
Power terminals:	AWG#10-14
Control/Sensor terminal:	AWG#14-22
Cooling:	Passive/no fan

Remote control enabled by Blender or Programmable timer relay  
 Over current, over voltage and over temperature protections  
 Optional: WiFi communication module, GFCI protections