SunWize® Power & Battery
Power Ready Systems

For continuous loads of 1-500 watts

SunWize® Power & Battery Power Ready Systems are stand alone systems using solar technology to provide continuous and reliable power to remote site loads. There is no need to connect to utility power. SWPB Power Ready systems are designed for site loads requiring 12, 24 or 48 volts DC or 110V-240V 50Hz/60Hz AC.

**Proven solution:** Solar has successfully powered thousands of critical applications worldwide for more than 30 years.

**Reliability:** SWPB systems allow your equipment to operate where power quality and reliability are a concern or where utility power does not exist in the most rugged environments.

**Cost-effective:** SWPB systems are cost-effective solutions providing continuous power to critical loads. SWPB systems minimize set up and installation time for rapid deployment.

**Installation flexibility:** SWPB systems can be mounted to pole sides and tops, rooftops and the ground. They can also be adapted to towers and other structures. OEM equipment can be housed in weatherproof enclosures in remote locations.

**Shipping and handling:** SWPB systems are designed to withstand rugged transportation to remote sites. Each subsystem is fully assembled and factory tested before shipment.

**KEY FEATURES:**

- Meets your equipment electrical power requirements
- System load verified for voltage tolerances and duty cycle of operation
- System design verified for performance criteria, reliability and function
- Geographic location analysis provided
- Standard product line flexibility allows customization
- Cost-effective design maximizes space efficiency
- Solid state electronics
- UL, FM and CSA listed components
- 20/25-year solar module warranty
- Full system warranty for one year
- Pre-assembled for easy installation
- No environmental impact
- Low operating and maintenance costs
- Complete systems reduce specifying and buying time
Technical Specifications

Environmental Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient Temperature</td>
<td>-30°C to 50°C</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>100% condensing</td>
</tr>
<tr>
<td>Altitude</td>
<td>3000m max</td>
</tr>
<tr>
<td>Wind Speed</td>
<td>110MPH sustained class C exposure</td>
</tr>
<tr>
<td>Seismic</td>
<td>Zone 4</td>
</tr>
</tbody>
</table>

Electrical Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage range</td>
<td>From 6V up to 48VDC nominal</td>
</tr>
<tr>
<td>Array current</td>
<td>From 5A up to 120A</td>
</tr>
<tr>
<td>Load current</td>
<td>From 5A to 60A</td>
</tr>
<tr>
<td>Temperature compensation</td>
<td>Standard on all models</td>
</tr>
<tr>
<td>Array wattage</td>
<td>From 3 to 3600 watts</td>
</tr>
<tr>
<td>Battery capacity</td>
<td>From 5 to 2960Ah</td>
</tr>
</tbody>
</table>

The System

• Provides uninterrupted power to the load with a power reliability of 99.5% worst case month based on weather and insolation data specific to the site.
• Engineered for 5 days (120hrs) of autonomy based on average low temperature.

The Modules

• Include conduit ready junction boxes.
• Comply with industry standard wind exposure of 110MPH sustained, 133MPH gust.
• Impact resistant for 25mm hail at terminal velocity.

The Batteries

• Designed for solar applications in deep-cycle operation.
• Battery life rated for greater than 500 cycles to 80% DOD. Total battery life varies with application temperature & load characteristics.
• Maintenance free and require no watering or equalizing charge.

The Controls

• Low voltage load disconnect, factory set for the battery type and system voltage used.
• Low voltage disconnect is set standard at 80% battery depth-of-discharge.
• Standard controls up to 20A are sealed, Class I, Div II rated.

Protection and Safety

• NEC compliant circuit protection.
• Finger safe terminal blocks and covers on all switches and breakers.
• All wiring is routed in liquid tight conduit for protection from damage and the elements

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SUNWIZE POWER READY SYSTEMS FOR CONTINUOUS LOADS OF 1 TO 75 WATTS

STANDARD CONFIGURATIONS

- Solar modules are fully encapsulated to resist harsh weather conditions
- NEC code compliant overcurrent protection and safety disconnect
- Solid state electronics display battery state-of-charge and controller status/errors
- Corrosion resistant control/battery enclosure. Premium enclosures are powder coated white aluminum for durability
- Sealed, lead-acid battery designed for deep discharge cycling
- Universal anti-theft mounting hardware available for outdoor pole or wall mounting
- Rainproof bottom-to-top passive airflow cooling with filtered vents
- Cooling airflow
- Air ventilation inlet
- Air ventilation outlet
- Rainproof bottom-to-top passive airflow cooling with filtered vents
## Power Ready Model Information

<table>
<thead>
<tr>
<th>PR –</th>
<th>ARRAY POWER</th>
<th>SYSTEM VOLTAGE</th>
<th>BATTERY CAPACITY</th>
<th>ENCLOSURE STYLE</th>
<th>STRUCTURE STYLE</th>
<th>ENCLOSURE FINISH</th>
<th>STRUCTURE FINISH</th>
<th>STANDARD OPTIONS</th>
</tr>
</thead>
</table>

Example: PR240-24-108-FPWA-111

**Array Power** (Watts)

**System Voltage:** 12 Volts / 24 Volts / 48 Volts

**Battery Capacity in AmpHrs** (based on 120hr discharge rate)

**Enclosure Style**
- **F** – Front opening hinged door, pole mounted
- **T** – Top opening hinged door battery enclosure, ground mounted
- **C** – Front opening door, captive screw cover, mil-finish aluminum, pole mounted

**Structure Style**
- **P** – Side of pole mount, separate from enclosure
- **G** – Ground/roof mount, separate from enclosure
- **T** – Top of pole mount
- **I** – Integrated mount (5 – 20W only)

**Enclosure Finish**
- **W** – Powder-coated white aluminum
- **A** – Mil-finish aluminum
- **S** – SS-304 stainless steel
- **F** – Reinforced fiberglass

**Structure Finish**
- **A** – Mill-finish aluminum
- **P** – Powder-coated finish
- **G** – Hot dipped galvanized

**System Standard Options:**

**Wire Protection**
- **0** – PV direct to controller w/in-line battery fuse
- **1** – DC-rated circuit breakers for PV & battery

**Lightning Protection**
- **1** – External surge arrestor 125VDC

**Load Distribution and Control**
- **0** – Load wired directly to controller
- **1** – Four terminal load distribution block
- **2** – Four terminal load distribution block, w/DC-rated circuit breaker
- **3** – External multi-cycle load timer, w/DC-rated circuit breaker
- **4** – Integral controller, w/multi-cycle load timer w/DC-rated circuit breaker
- **5** – Dusk-dawn sensor, w/DC-rated circuit breaker
- **6** – Dusk-dawn sensor, w/external multi-cycle load timer, w/DC-rated circuit breaker

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**SunWize PR230 Power Ready System**

**SunWize PR110 Power Ready System**

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