

# SUNWIZE POWER READY SYSTEMS

For continuous loads of 1 to 100 watts, 12/24/48VDC



**Shipping and Handling** - Power Ready Systems are designed to withstand rugged transportation to remote sites. Each subsystem is fully assembled for factory testing before shipment. The prewired systems are shipped with a protective cover over the array and are secured to a skid. The solar array for larger systems is shipped in a separate plywood crate and the battery enclosure is

mounted on a skid. In some cases, batteries are shipped separately.

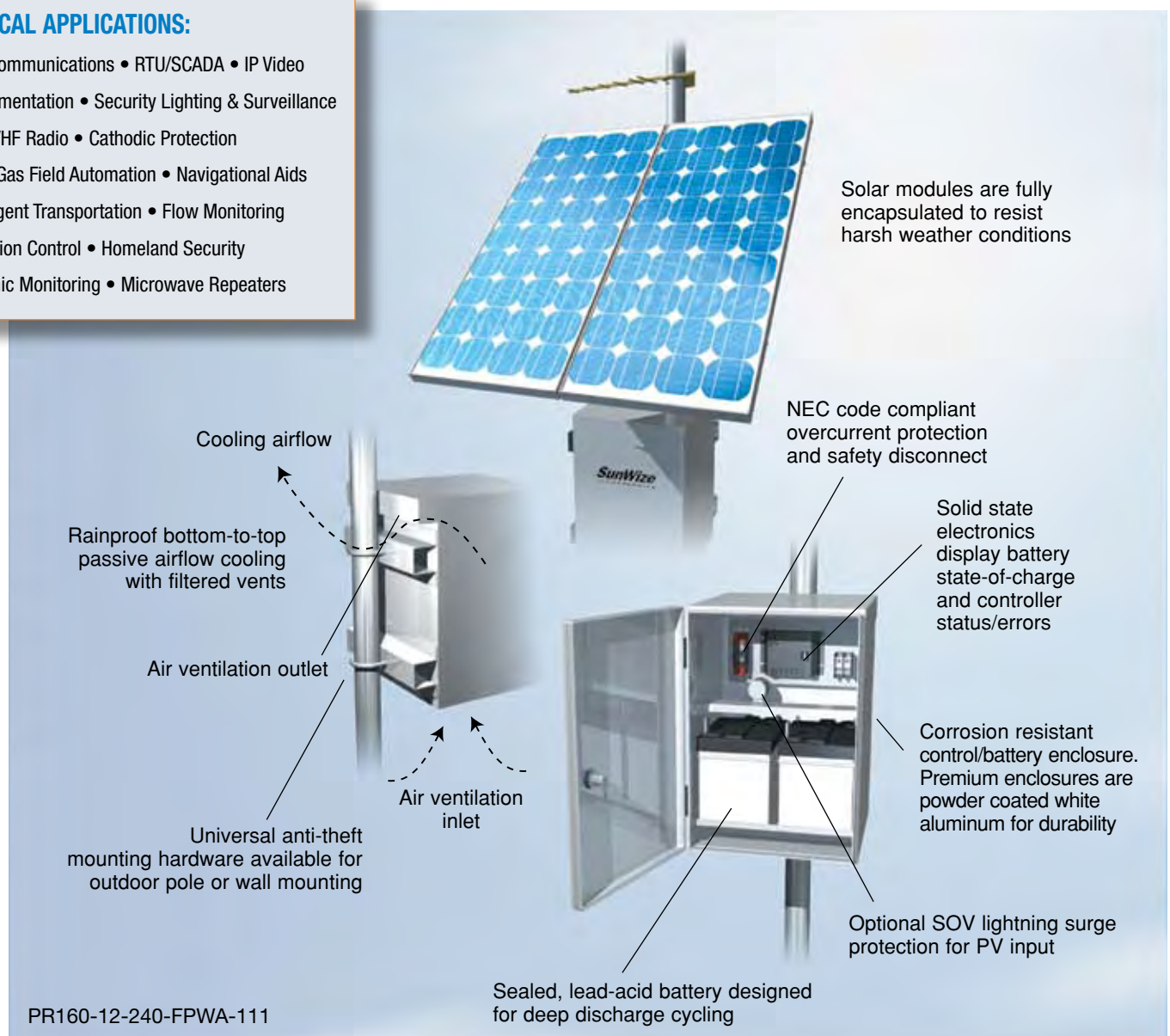
**Warranty** - Power Ready Systems carry a one-year system warranty for materials and workmanship. The solar modules have up to a 25-year warranty. Careful component selection results in a system with a lifetime exceeding 25 years with battery replacements every five to ten years.

## Features and Benefits

UL, FM and CSA Listed components	Preassembled, prewired systems minimize field installation time and eliminate wiring errors
Wide range of systems available	Solid state electronics for improved efficiency and reliability
Sealed, lead-acid battery designed for deep discharge cycling	Low maintenance and operating costs
NEC code compliant overcurrent protection and safety disconnect	Custom integration of your equipment
Low voltage load disconnect	Systems can be drop shipped to your customer
Corrosion resistant control/battery enclosure	One-year system warranty
Installation, operation & maintenance documentation	

### TYPICAL APPLICATIONS:

Telecommunications • RTU/SCADA • IP Video  
 Instrumentation • Security Lighting & Surveillance  
 UHF/VHF Radio • Cathodic Protection  
 Oil & Gas Field Automation • Navigational Aids  
 Intelligent Transportation • Flow Monitoring  
 Irrigation Control • Homeland Security  
 Seismic Monitoring • Microwave Repeaters



PR160-12-240-FPWA-111

# POWER READY SPECIFYING GUIDE

## System Selection Guidelines

The world insolation map on the back cover, showing the peak daily sun hours for the worst case month, is used in designing the system for your equipment location. The System Selection Table considers long term weather data and accounts for the variability in weather patterns, assuring system operation even under worst case conditions.

“Sizing” a PV power system refers to computing how many solar modules are required to meet the equipment energy demand, or “load” during worst case conditions. The System Selection Table specifies a system designed for an availability of 99.99%. Systems with a larger PV array and battery bank will provide a greater safety factor against weather-related downtime.

### HOW TO SELECT YOUR SYSTEM

- 1) Use the map on the back cover to select the insolation zone (daily peak sun hours) corresponding to the site location.
- 2) Determine your daily equipment load requirement in Amp-hours/day at the specified system voltage.
- 3) In the System Selection Table, under your Peak Sun Hours zone column, find the value of Amp-hours/day that is greater than or equal to your load. Based on your system voltage, select the initial system part number, including PV array wattage, system voltage, & battery Amp-hour rating (e.g., PR115-12-240).
- 4) Use the System Equipment Options table to choose your enclosure, PV array mount and system options, and complete your Power Ready system Part Number.

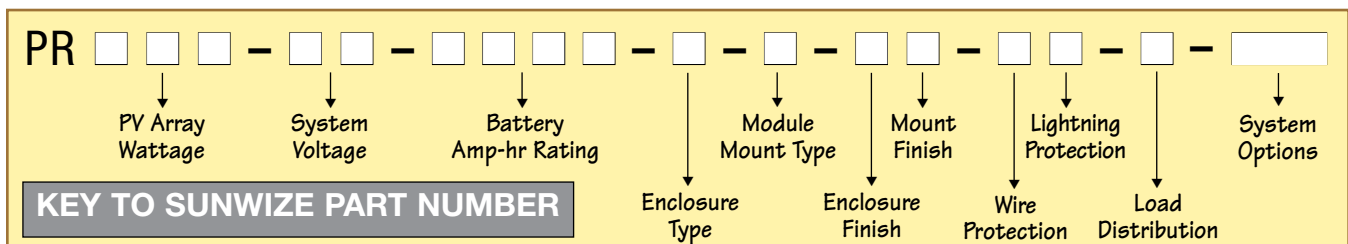
## System Selection Table

Figures below are daily load in Amp-hrs/day. Refer to the map on the back cover of this catalog.

12 Volt SYSTEMS	PEAK SUN HOURS											24 Volt SYSTEMS
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	
PR005-12-019	0.2	0.3	0.4	0.6	0.7	0.8	1.0	1.1	1.2	1.4	1.5	PR010-24-019
PR010-12-038	0.5	0.7	1.0	1.2	1.5	1.7	2.0	2.3	2.5	2.8	3.1	PR020-24-038
PR020-12-038	1.0	1.5	1.9	2.4	2.8	3.4	4.0	4.4	5.0	5.6	6.2	PR040-24-038
PR040-12-079	1.9	2.8	3.8	4.8	5.6	6.7	7.8	8.6	9.8	11.0	12.2	PR080-24-079
PR050-12-120	2.4	3.6	4.8	6.0	7.1	8.5	9.8	10.9	12.3	13.8	15.2	PR100-24-120
PR060-12-120	2.9	4.3	5.7	7.1	8.3	9.9	11.5	12.7	14.5	16.3	18.0	PR120-24-120
PR080-12-120	3.7	5.6	7.4	9.3	10.9	12.8	15.1	16.7	19.0	21.3	23.6	PR160-24-120
PR085-12-120	3.9	5.9	7.8	9.9	11.7	13.8	16.2	17.9	20.2	22.5	24.9	PR170-24-120
PR090-12-240	4.1	6.2	8.2	10.4	12.6	14.7	17.2	19.1	21.5	23.8	26.2	PR180-24-240
PR100-12-240	4.7	7.0	9.3	11.8	14.0	16.5	19.3	21.5	24.2	26.9	29.7	PR200-24-240
PR110-12-240	5.2	7.8	10.4	13.1	15.5	18.3	21.4	23.8	26.9	30.0	33.2	PR220-24-240
PR115-12-240	5.5	8.2	11.0	13.8	16.2	19.2	22.4	25.0	28.2	31.6	35.0	PR230-24-240
PR150-12-240	7.1	10.6	14.0	17.5	20.0	23.9	28.2	31.1	35.3	40.3	44.5	PR300-24-240
PR160-12-240	7.5	11.2	14.7	18.3	21.3	25.1	29.7	32.5	37.2	42.6	47.2	PR320-24-240
PR170-12-240	7.9	11.9	15.5	19.2	22.7	26.4	31.1	34.0	39.0	44.9	49.8	PR340-24-240
PR180-12-240	8.3	12.5	16.2	20.0	24.0	27.6	32.6	35.4	40.9	47.2	52.5	PR360-24-240
PR200-12-240	9.4	14.0	18.1	22.3	25.9	30.5	36.0	39.0	45.3	53.0	59.5	PR400-24-240
PR230-12-240	11.0	16.3	21.0	25.8	28.8	34.8	41.2	44.3	51.8	61.7	70.0	PR460-24-240
PR230-12-480	11.6	16.5	22.0	28.2	32.2	38.4	44.9	50.0	56.6	63.4	70.0	PR460-24-500
PR255-12-480	12.6	18.3	24.4	31.0	36.1	42.7	49.4	55.3	62.1	69.0	75.9	PR510-24-500
PR270-12-600	13.2	19.4	25.9	32.7	38.5	45.3	52.2	58.5	65.4	72.4	79.4	PR540-24-600
PR300-12-600	14.4	21.6	28.8	36.0	43.2	50.4	57.6	64.8	72.0	79.2	86.4	PR600-24-600
PR340-12-600	16.3	23.9	31.7	40.1	47.3	56.3	64.8	72.7	81.1	90.4	98.8	PR680-24-600
PR360-12-750	17.3	25.0	33.2	42.2	49.4	59.2	68.4	76.6	85.7	96.0	105.0	PR720-24-750
PR400-12-750	18.8	27.2	36.2	46.0	53.8	64.5	74.5	83.4	93.4	104.6	114.4	PR800-24-750
PR425-12-750	19.8	28.6	38.0	48.3	56.6	67.8	78.3	87.7	98.1	109.9	120.2	PR850-24-750
PR460-12-900	22.1	33.1	44.2	55.2	66.2	77.3	88.3	99.4	110.4	121.4	132.5	PR920-24-900
PR500-12-900	24.2	35.3	46.7	58.9	68.4	81.1	94.6	105.3	118.4	131.1	144.9	PR1000-24-900
PR575-12-1200	28.1	39.3	51.3	65.8	72.6	88.1	106.5	116.4	133.4	149.2	168.2	PR1150-24-1200
PR600-12-1200	29.4	40.7	52.9	68.1	74.0	90.5	110.4	120.1	138.4	155.3	175.9	PR1200-24-1200

Note: Each system was designed for a Loss of Load Probability (LOLP) of less than 0.1% for the worst month. • Contact SunWize for 48 Volt system selections.

## Part Number Configuration



## System Equipment Options for Part Number Configuration

### PV Array Wattage (refer to Selection Table)

### System Voltage

12 volts

24 volts

48 volts (contact SunWize)

### Battery Amp-hr Rating (@ system voltage)

### Enclosure Type

**F** – Premium front opening hinged door, pole/wall mount

**T** – Premium top opening hinged door, ground/pad mount

**C** – Front opening door (screw-type), pole/wall mount

**E** – Economy, pole/wall mount

### Module Mount Type

**I** – Integral with enclosure (5 – 10 Wp systems)

**P** – Side-of-pole mount, separate from enclosure

**G** – Ground mount, separate from enclosure

**T** – Top-of-pole mount (Special order; specify pole size)

### Enclosure Finish

**A** – Brushed aluminum

**W** – White powder coated aluminum

**F** – Fiberglass FRP (Special Order, 1 battery only)

**S** – Stainless Steel (Special order)

### Mount Finish

**A** – Mill finish aluminum

**P** – Painted steel

**W** – Powder coated white aluminum (Special order)

**N** – Anodized Aluminum (Special order)

### Wire Protection

**0** – PV and battery wired directly to controller, fused battery line

**1** – DC-rated circuit breakers for PV and battery  
(standard – NEC compliance)

### Lightning Protection

**0** – Standard MOV surge protection

**1** – Silicon-oxide varistor (SOV)

### Load Distribution and Control

**0** – None, load wired directly to controller

**1** – Four terminal load distribution block (standard)

**2** – DC-rated circuit breaker or fuse

**3** – Multi-cycle timer



720W Power Ready System



115W Power Ready System

## System & Controller Options for Part Number Configuration

**a.** DC to DC converter (specify output voltage/current)

**b.** DC to AC inverter (specify output voltage/power)

**e.** Customer equipment integration

**f.** Theft deterrent solar module hardware

**g.** Load output cable

**h.** Bird deterrent spikes on top of array

**m.** MPPT controller

**n.** SP, polyphaser coax surge protector

### Controller Options

**i.** LCD - displays battery voltage, SOC, charging and load current, controller status/errors

**j.** LVA - low battery voltage alarm relay

**k.** RS232 serial communication port