GDS Solar Power System Specification Sheet

Power Ready Systems

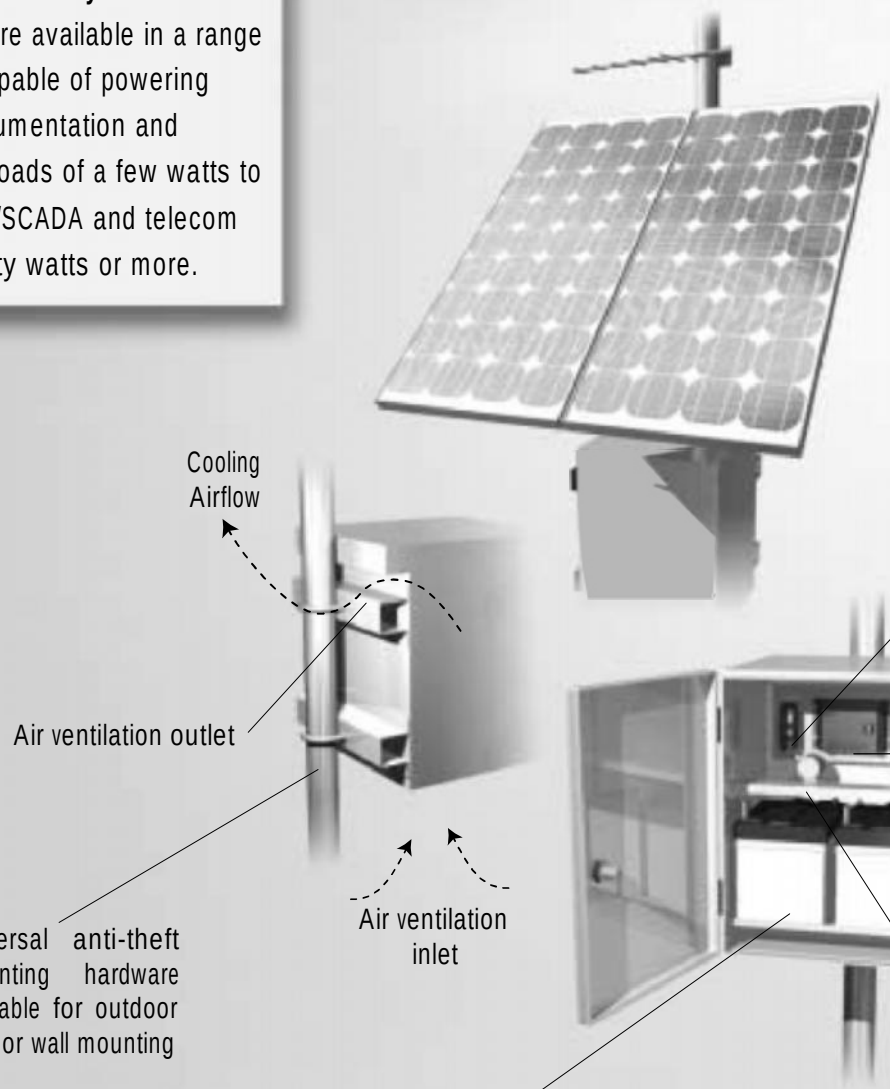
- **Preassembled racks and enclosures**
- **Pretested systems**
- **Prewired modules and batteries**
- **Single lift systems**

The **GDS Power Ready Systems** are complete, fully integrated power supplies designed for site loads requiring 12, 24 or 48 volts DC. Each system provides safe and reliable power generation without the need and expense of installing utility power. The sealed, maintenance free batteries are designed for deep cycle operation and extended life in solar applications. The aluminum array support structures and battery enclosures are strong yet lightweight and corrosion resistant for harsh marine or severe weather locations.

Standard Features and Benefits
Solar modules are fully encapsulated to resist harsh weather conditions
Low voltage load disconnect
Sealed, lead-acid battery designed for deep discharge cycling
NEC code compliant overcurrent protection and safety disconnect
Temperature compensated battery charging
Corrosion resistant control/battery enclosure
Installation, operation & maintenance documentation
Preassembled, prewired systems minimize field installation time & eliminate wiring errors
Solid state electronics for improved efficiency and reliability
Low maintenance and operating costs
Complete systems reduce specifying and buying time
Quality components assure long system life
Full system and performance warranty available on prepackaged systems

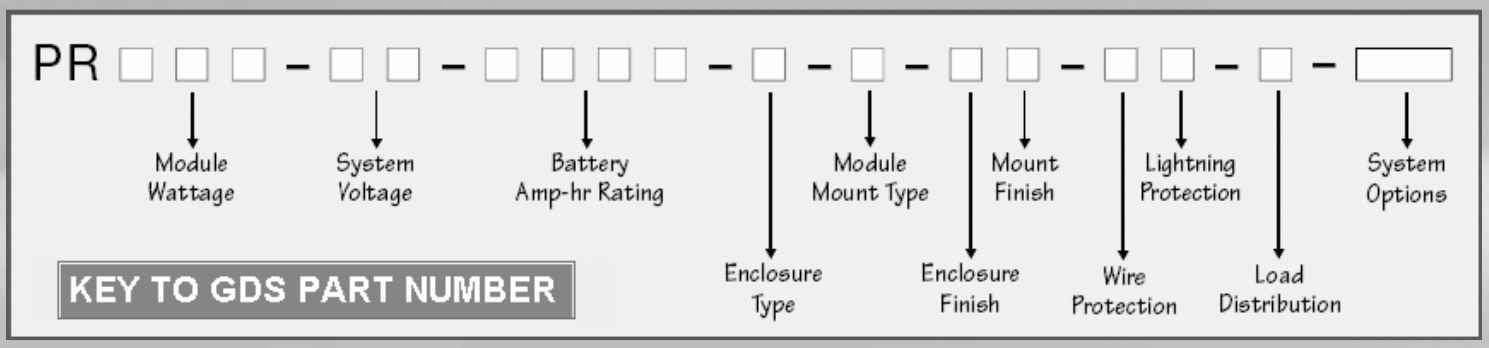
System Options (choose ANY & enter into GDS Part Number)
a. DC to DC converter
b. DC to AC inverter
c. Data logging / Remote monitoring
d. Cathodic protection controller
e. Electronic load compartment
f. Theft deterrent solar module hardware
g. Helicopter lifting lugs
h. Bird deterrents
Controller Options (choose ONE & enter into GDS Part Number)
i. GDS LCD - displays battery voltage, SOC, charging & load current, controller status/errors
j. GDS LVA - low battery SOC/load disconnect contact closure

GDS Power Ready Systems are available in a range of sizes capable of powering small instrumentation and telemetry loads of a few watts to larger RTU/SCADA and telecom loads of fifty watts or more.



Shipping and Handling
Because Power Ready Systems are designed to withstand rugged transportation to remote sites, single-lift integral lifting lugs and/or forklift slots are provided. Optional helicopter handling features are also available. The system is fully assembled for factory testing before shipment. The prewired systems are typically shipped fully assembled with a protective cover over the array and are bolted 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. A three-year GDS performance warranty is available on pre-packaged systems. The solar modules have up to a 25-year warranty, the longest in the industry.
Careful component selection results in a system with a lifetime exceeding 25 years with battery replacements every five to ten years.



SYSTEM SELECTION GUIDELINES

The Winter Peak Sun Hour map below is used in predicting the system performance at your equipment location. The System Selection Table carefully considers long term weather data and accounts for weather patterns by providing a 20% safety factor, assuring system operation on a continuous and reliable basis. GDS Power Ready Systems are sized according to the maximum continuous days of no sun (cloudy) conditions that are expected at the site location. Our conservative system design engineering provides the proper system selection to assure years of trouble-free, reliable service.

HOW TO SELECT YOUR SYSTEM

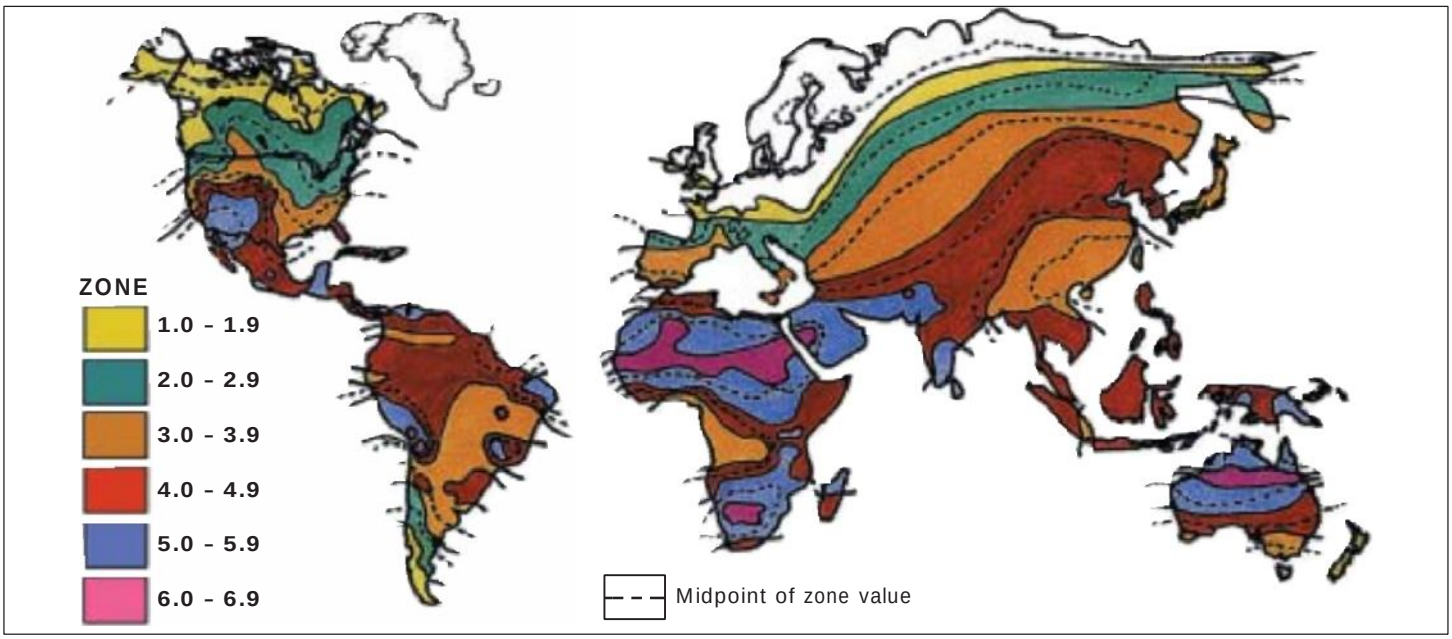
The chart below specifies a system designed to meet the daily load of your equipment.

1) Use the map to select the insolation zone that corresponds to the equipment site location.

2) Determine your daily equipment load requirement in Amp–hrs/day at the specified voltage.

3) In the Selection Table, under your zone column, find the value of Amp–hours/day that is greater than or equal to your load. Based on your system voltage, select your GDS part number.

WORLD INSOLATION MAP (Winter peak sun hours in worst case month)



SYSTEM SELECTION TABLE (Figures below are daily load in Amp–hrs/day)

12 Volt SYSTEMS	PEAK SUN HOURS 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	24 Volt SYSTEMS
PR 5-12-19	.24	.36	.48	.60	.72	.84	.96	1.0	1.2	1.3	1.4	PR 10-24-38
PR 10-12-19	.48	.72	.96	1.2	1.4	1.6	1.9	2.1	2.4	2.6	2.8	PR 20-24-38
PR 20-12-38	.96	1.4	1.9	2.4	2.8	3.3	3.8	4.3	4.8	5.2	5.7	PR 40-24-38
PR 36-12-70	1.6	2.5	3.3	4.2	5.0	5.8	6.7	7.5	8.4	9.2	10.0	PR 72-24-70
PR 50-12-115	2.4	3.6	4.8	6.0	7.2	8.4	9.6	10.8	12.0	13.2	14.4	PR 100-24-115
PR 75-12-130	3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.2	18.0	19.8	21.6	PR 150-24-130
PR 100-12-230	4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0	26.4	28.8	PR 200-24-230
PR 150-12-260	7.2	10.8	14.4	18.0	21.6	25.2	28.8	32.4	36.0	39.6	43.2	PR 300-24-260
PR 200-12-390	9.6	14.4	19.2	24.0	28.8	33.6	38.4	43.2	48.0	52.8	57.6	PR 400-24-390
PR 240-12-460	11.5	17.2	23.0	28.7	34.5	40.2	46.0	51.7	57.5	63.2	69.0	PR 480-24-530
PR 300-12-600	14.4	21.6	28.8	36.0	43.2	50.4	57.6	64.8	72.0	79.2	68.4	PR 600-24-600
PR 350-12-690	16.8	25.2	33.6	42.0	50.4	58.8	67.2	75.6	84.0	92.4	100.8	PR 700-24-795
PR 400-12-795	19.2	28.8	38.4	48.0	57.6	67.2	76.8	86.4	96.0	105.6	108.0	PR 800-24-795
PR 450-12-900	21.6	32.4	43.2	54.0	64.8	75.6	86.4	97.2	108.0	118.8	129.6	PR 900-24-900
PR 500-12-1060	24.0	36.0	48.0	60.0	72.0	84.0	96.0	108.0	120.0	132.0	144.0	PR 1000-24-900

Contact GDS for 48 Volt system selections.

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When Security Counts, Call Us!

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System Equipment for Part Number Configuration

Module Wattage

System Voltage

12 volts

24 volts

48 volts

Battery Amp-hr Rating

Enclosure Type

F – Front opening hinged door, pole mounted

T – Top opening hinged door, ground/pad mounted

C – Front opening door (screw-type), pole mounted

E – Economy

Module Mount Type

I – Integral with enclosure

P – Pole mount, separate from enclosure

G – Ground mount, separate from enclosure

Enclosure Finish

A – Milled aluminum (standard)

W – Powder coated white aluminum

S – Galvanized steel

F – Fiberglass reinforced polyester

Mount Finish

A – Milled aluminum

P – Painted steel

S – Galvanized steel

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

3 – Multi-cycle timer

Industrial Prepackaged Solar Power Systems for:

Telecommunications

RTU/SCADA Applications

Data Collection

Instrumentation

Security Lighting & Surveillance

Navigational Aids

Flow Monitoring

UHF/VHF Radio

Seismic Monitoring

Tank Gauging

Radio Telephones

Railroad Signaling

Area/Sign Lighting

Cellular Extenders

Microwave Repeaters

Wireless Data

Cathodic Protection

Irrigation Control

RELIABLE PEOPLE . . .

RELIABLE PRODUCTS . . .

RELIABLE POWER !