

Site Power System



The Site Power System (SPS) series provides a complete DC power solution that integrates quickly with batteries, loads, and monitors. Available in 12, 24 and -48 volt configurations, the compact 300 watt assembly contains: power supply with temperature compensated, automatic boost/float battery charge cycle; low voltage disconnect; and programmable alarm contacts, all in a compact case. Versatile installation options include wall mount, 19" rackmount, and DIN-Rail. High operating temperature rating with convection cooling make the unit ideal for remote site shelters and pole mount enclosure applications, as well as private network base stations and microwave sites.

Features

- Well regulated noise free 300 watt output - no interference with sensitive electronic loads
- Separate Battery Charger output with remote temperature compensation sensor
- Automatic Boost voltage output after AC power failure quickly recovers battery
- Low voltage disconnect protects batteries from over discharge
- Output current indicator LEDs
- Wide temperature operating range (-10 to +60° C) with convection cooling - no fans to service
- Alarm contacts interface with remote monitor systems
- Active load sharing allows wiring in N+1 configuration for redundancy and/or in parallel for higher current capacity
- Optional Rack and DIN-Rail mounting bracket

Models	Input All Models	Output Voltage	Output Amps	Size/Weight All Models
SPS 12-20	100 - 275 VAC, 50 - 60 Hz.	12	20	12.25" W x 5.75" H x 2.45" D, (311mm x 146mm x 62mm) 3.4 Lbs./1.5 Kg.
SPS 24-10		24	10	
SPS 48-6		48	6	



Powering the Network

Site Power System

Specifications: Models SPS 12-20, SPS 24-10, & SPS 48-6

AC Input

Nominal:	110/220V, 50/60Hz
Voltage Range:	100-275V AC (full power output), 85-100V AC (reduced power output)
Frequency Range:	45-66Hz
Power Factor/Efficiency:	>0.99 (full load)/87%
Input Fuses:	Fuses in phase & neutral
Maximum Input Current:	4A
Protection:	
Input Voltage:	Automatic shutdown, restarts automatically when correct voltage restored.
Input Rush:	<2x maximum input current.

DC Output

	SPS 12-20	SPS 24-10	SPS 48-6
Nominal Voltage:	12V	24V	48V
Rated Voltage:	13.6V	27.2V	54V
Voltage Range:	11-15V	22-30V	44-60V
Maximum Current:	23A	10A	6A
Redundancy/Scalability:	Ok to wire in parallel, active load sharing		
Temperature Compensation:	Output voltage slope adjustable 0.1 to 0.2%/°C; 3' cable with battery lug sensor provided		
Regulation:			
Line/Load:	±0.1%/±0.5% (no load to full load)		
Hold-up Time:	>15ms for 20% output voltage drop.		
Start-up Time:	Walk-in delay 2 seconds (depends on AC input voltage)		

Protection

Current Limit:	Adjustable to 50-100% of maximum rated current
Over Temp:	Automatic current turndown, backup shutdown protection
Polarity Reversal:	Output fuse with crowbar diode
Over Voltage:	Adjustable limit
Noise: (under nominal conditions)	
Ripple	<100Hz: <5mV rms
Voice Band 100Hz to 5KHz:	<1mV rms psophometric
Wide Band 5kHz to 1 MHz:	<5mV rms
Peak to Peak 0 to 20MHz:	<50mV p-p

Isolation

Input to Output:	3000V AC
Input to Chassis:	2500V AC (VDR to chassis removed.)
Output to Chassis:	1500V AC

Environmental

Cooling:	Convection cooled
Range:	-10 to +60°C
Humidity:	5-95% RH (non-condensing)
Altitude:	<7500m de-rate maximum ambient temperature by +4° C per 3000m above sea level

Mechanical

Case:	Painted Aluminum
Mounting:	Wall or enclosure back plane, vertical orientation
Dimensions:	12.25" W x 6.40" H x 2.45" D; (311mm x 163mm x 62mm)
Weight:	3.4 lbs.; 1.5kg
Connections:	
AC:	IEC 320 universal connection, 3 foot power cord provided, NEMA 5-15R
Output to Load:	4 way lumberg macromodule, screw style
Output to batteries:	4 way lumberg macromodule, screw style
Temperature Sensor:	2 way lumberg macromodule, (pre-installed on 6 foot cable)
Monitor Connection:	RJ45

Standard Features

Output Current Indicator:	Ten segment red LED "dot" display
Auto Float/Boost:	Rectifier enters boost mode at power up. When battery current reduces to float threshold limit (adjustable from 0.1A to 40% MRC), unit reverts to float voltage setting. When in boost but out of current limit, rectifier will automatically switch back to float after approximately four hours. If battery current exceeds the float threshold limit when the rectifier is in float mode it will automatically switch to boost mode.
Alarm and Indicator Controls:	Positive V out, Load share signal (in/out), External shutdown, Open collector 'off normal' alarm (OSVD, over temp. limit), LVD synchronisation signal (in/out) Temperature compensation input signal, Open collector rectifier fail (via 4k7 resistor), Open collector mains fail, Negative V out

	SPS 12-20	SPS 24-10	SPS 48-6
Low Voltage Disconnect:			
Voltage Adjustment Range:	10-12V	19-24V	39-48V
Maximum Load Current:	20A	10A	6A
Internal Alarm Card:	4x N.O or N.C (selectable) relay contacts with single common for rectifier fail, off normal, float low, float high. 1x VF changeover relay contact for mains fail. Relay contacts rated at 100V DC 1A. Connections via "mini combicon" connector accepts 16 AWG (1.5mm diameter) wire.		

LED Indicators:	Green - AC on. (primary converter operating) Green - Temperature probe connected and within normal limits. Red - Rectifier 'failed'. Green - Rectifier in 'float' mode. Yellow - Rectifier in 'boost' mode. Yellow - Rectifier in 'current' limit. Red - Rectifier 'off normal'. (over temp., OSVD, low output volts)
-----------------	---

Internal Adjustments:

Float voltage, Boost voltage, Over voltage shut down, Current limit, Temperature compensation slope, Auto boost to float threshold limit, Load disconnect voltage, Load disconnect hysteresis voltage

Design Standards

EN60950, Electrostatic Discharge: CISPR24, Radiated Radio Frequency: CISPR22, AC Harmonics: EN61000-3-2, AC Flicker and Fluctuation: EN61000-3-3, CE

Optional Equipment:

Rackmount Bracket, 19", 4 RU (7 inches), DIN-Rail Adapter Bracket

Specs subject to change.



Powering the Network