

Sentinel Power System



Incredible Functionality, and Scalability in a 1 RU, 600 Watt to 1.8 Kw DC Power System

- 19", 1U rackmount shelf with integrated power distribution and SNMP digital controller
- 90-250 VAC input, power factor corrected
- 3 power bays accept 600 watt modular rectifiers, -48V
- 33 amp, 1800 watt total max. output capacity
- Output temperature compensated for precise battery charging
- 4 DC circuit breaker distribution capacity, with tripped breaker alarm
- Master disconnect breaker for two battery banks, with tripped breaker alarm
- Controller with digital display of system parameters with TCP/IP interface and SNMP monitoring/logging
- Alarm contacts monitor major system functions
- Low voltage disconnect built-in
- Easily configures to meet site power requirements

Complete system design and integration by Newmar to your application parameters: Rectifier configuration, installation of distribution circuit breakers, and configuration of alarms and monitors. Assembly in a relay rack with batteries and wiring also available. Let us submit a proposal on your next project.

System Power Configurations @ 48V

Watts Per Rectifier	# of Rectifiers Installed		
	1	2	3
600	11A (600W)	22A (1200W)	33A (1800W)

Sentinel Power System

AC Input

Nominal:	115 or 230VAC
Voltage Range:	90-300V
Frequency Range:	45-65 Hz
Power Factor:	>0.99
Efficiency:	>92% (>50% output power)

DC Output

Voltage	-48 volt
Output Ratings:	Constant power output from 54V to 58V
Nominal Voltage:	48V
Rated Voltage:	54V

Power:

Rated maximum System Output Power:	1800W @ 54V
Polarity:	Positive earth. 48 volt
Individual Rectifier Power:	<u>600 watt</u>
Amperage @ 115 or 230 VAC in	4.2

DC Distribution:

Load:	4 breaker position capacity, available amperages (specify) 6A, 10A, 20A, 30 amp, with tripped breaker alarm
Battery:	2 x 30A battery circuit breakers.
Breaker Fail Detection:	Electronic fail detection on both load and battery. Breakers
Low Voltage Battery Disconnect:	80A battery LVD installed standard, with disconnect alarm

Monitoring & Control:

Monitors all power system conditions including DC voltage, rectifier current, battery current, battery temperature, and distribution failure. Visual notification of alarm conditions by LED's and a 4 line x 16 character alpha numeric display mounted on the front panel, with remote notification being enabled by relay contacts, RS232 or TCP/IP (using SNMP). It has a built-in web based configurator allowing setup of system parameters using a web browser and utilizes a USB communications port which allows for local monitoring of system operations as well as easy downloading of configuration files for multiple site installations.

General System

Protection:

Current Limit:	Adjustable to 50-100% of maximum rated current.
Over Temperature:	Automatic current reduction, backup shutdown protection.
Polarity Reversal:	Output fuse with crowbar diode.
Over Voltage:	Adjustable limit.
Input Voltage:	Auto shutdown, auto restart when correct voltage restored.
Input Inrush:	<2x maximum input current.
Input Fuses:	In phase and neutral.

Technical Characteristics:

Noise:	Ripple <100Hz: <1mV rms unweighted
Voice band 100Hz-5KHz:	<2mV rms psophometric
Wide band 5kHz-1MHz:	<5mV rms unweighted
Peak to Peak 0-20MHz:	<50mV peak to peak
Isolation:	Input to Output: 4000V DC.
Input to Chassis:	3500V DC (VDR to chassis removed)
Output to Chassis:	2100V DC
Regulation:	Line = $\pm 0.1\%$, Load = $\pm 0.5\%$ (no load to full load)

Mechanical

Shelf: Dimensions:	19" W x 1.75" H x 10.2" D
Weight:	19.84 Lbs. (excluding rectifier modules)
Rectifiers: Dimension:	2.2" W x 1.7" H x 9.25" D
Weight:	1.7 Lbs
Cooling:	Forced cooled.

Environmental

Ambient Temperature: Range:	Nominal: -20° C to +70° C (maximum output power is derated above +50° C)
Storage:	-20° C to + 70° C
Humidity:	0-98% RH (non-condensing)
Altitude:	<3,000 M., De-rate maximum ambient temperature by 4° C per 1,000 M. above sea level.

Compliances

Safety:	EN60950
Electrostatic Discharge:	CISPR24
Radiated Radio Freq:	CISPR22
AC Harmonics:	EN61000-3-2
AC Flicker & Fluctuation:	EN61000-3-3
Other:	CE & RoHS compliant



Powering the Network