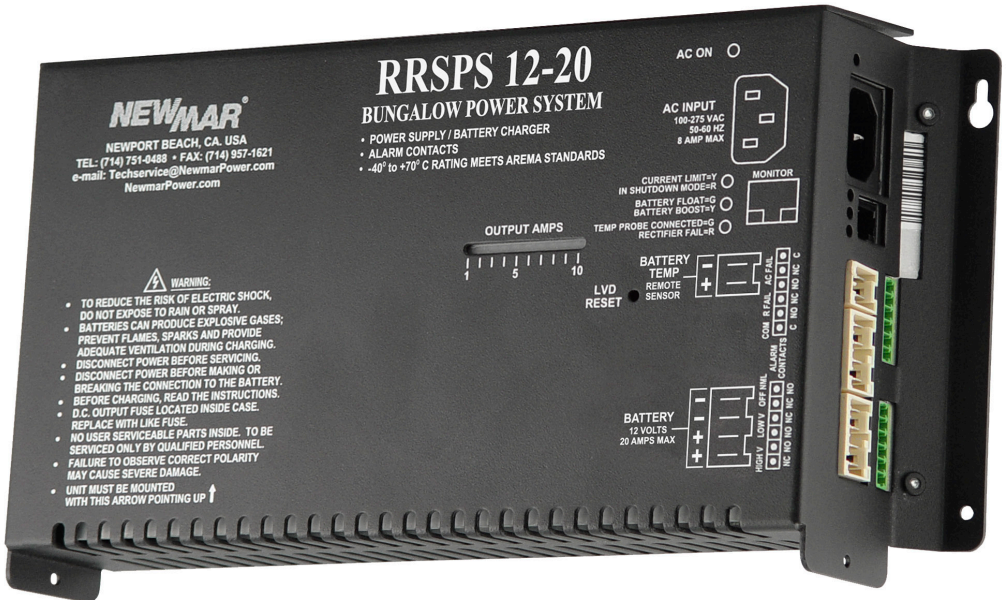
Bungalow & Remote Site Power System



The Bungalow and Remote Site Power System (RRSPS) series provides a DC power solution that integrates quickly with batteries, loads, and transmitters. Available in 12, 24 or 48 volt configurations, the compact 300 watt assembly contains: power supply with temperature compensated battery charger; and programmable alarm contacts, all in a rugged, vibration hardened compact case. Versatile installation options include wall mount, 19" rackmount, and DIN-Rail. Extreme operating temperature rating with convection cooling make the unit ideal for rail wayside bungalows, remote site shelters, pole mount enclosure applications, as well as private network base stations and microwave sites.

Features

- Well regulated noise free 300 watt output - maintains batteries with no interference to sensitive electronic loads
- Charger output regulated by temperature compensation sensor with high voltage limit under extreme low temperatures (meets AREMA standards)
- Low voltage disconnect option protects batteries from extreme discharge (feature activated by wiring configuration)
- Output current indicator LEDs
- Wide temperature operating range (-40 to +70° C) with convection cooling - no fans to service, meets AREMA standards
- High input/output isolation ratings meet AREMA standards
- 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
- Hardened for high vibration enviroments in wayside applications
- Optional Rack and DIN-Rail mounting bracket

Models	Input All Models	Output Voltage	Output Amps	Size	Weight
RRSPS 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
RRSPS 24-10		24	10		
RRSPS 48-6		48	6		

Specs subject to change.

Powering the Network

March 2011

Bungalow & Remote Site Power System

Specifications: Models RRSPS 12-20, RRSPS 24-10 & RRSPS 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 @ 110 VAC, 2A @ 220 VAC
Protection:	
Input Voltage:	Automatic shutdown, restarts automatically when correct voltage restored.
Input Rush:	<2x maximum input current.

DC Output	**RRSPS 12-20**	**RRSPS 24-10**	**RRSPS 48-6**
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 Safeguards: Reverts to default voltage if sensor wire becomes short or open. High voltage limit under extreme low temperature conditions

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: Meets AREMA Standards

Input to Output:	4,200V DC
Input to Chassis:	3,500V DC (VDR to chassis removed.)
Output to Chassis:	2,100V DC

Environmental

Cooling:	Convection cooled
Range:	-40° to +70°C operating range; -10° to +60° @ 100% load rating. derate to 20% load below -10° C and above +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, 8 foot power cord provided with Pigtail end
Output to Load & 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
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

	RRSPS 12-20	**RRSPS 24-10**	**RRSPS 48-6**	
Low Voltage Disconnect:				
Voltage Adjustment Range (Option*):	10-12V	19-24V	39-48V	* Activated by wiring configuration

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 'current' limit. Red - Rectifier 'off normal'.

Internal Adjustments: Float voltage, Over voltage shut down, Current limit, Temperature compensation slope, Load disconnect voltage and hysteresis (optional)

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

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