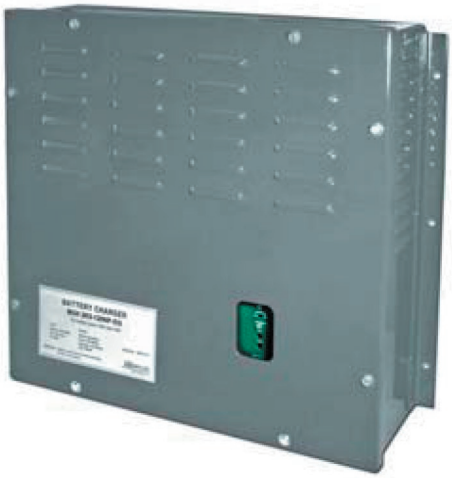
RCH2500 Series AC Battery Charger



Benefits

- Quiet operation
- Power sensitive electronics without interference
- Rugged & Reliable
- Ensure years of safe and trouble free operation
- Fast & Accurate Charging

Applications

- Oil drilling and transport sites
- Pipeline Industry
- Marine & other Rugged Environments
- Steel mills
- Electric Utilities and Substations
- Base Station Power (Radio & Telecommunications)
- OEM Applications
- Field Work / Construction Sites
- Solar Power Systems
- Emergency Power Backup (UPS)
- Security Systems

Battery Chargers

RCH2500 Series

Description

The RCH2500-120NP-EQ rugged, industrial quality battery charger uses field-proven high-frequency conversion technology to deliver up to 2500W continuous output power. In float-mode it provides 135Vdc/16A for charging a 120V (60 cell) battery.
The equalize function, activated by a push-button “EQ/ON”, elevates the output voltage to 141Vdc for the battery.
The equalize time is controlled by a built in timer, adjustable in the 1-9 hour range.
The equalize mode can be de-activated at any time by pushing the “EQ/OFF” button.
This charger is constructed with internal modules, connected in parallel, which also provide inherent redundancy: the failure of one module would only cause a minor loss in output power.
The unit is rated for heavy-duty applications with -40°C to +70°C temperature rating for full specification.
Cooling is by convection via louvers on the cabinet. The absence of fans, low component count and the use of components with established reliability result in a high MTBF.
The charger output is equipped with a built-in crossbar diode and output breaker as a safety feature against accidental reverse battery connection.
Other protection includes input inrush current limiting, over-voltage protection, short circuit protection, and a self-resetting thermostat for thermal protection.
An optional Charger Fail Alarm (Form C) indicates loss of AC input power.
The unit is manufactured at our plant under strict quality control.

Features

- 2500W output power without fan
- Full electronic protection
- Telecom quality
- Field-proven design
- 2 years parts and labour warranty

Specifications *(Specifications Subject to Change Without Notice)*

Input Voltage	240Vac, 47-63Hz 190-264Vac operating range, Input Current: 23Arms max PFC-input versions are also available
Input Protection	Inrush current limiting Varistors Internal safety fuses Input breaker also for AC ON/OFF Lower input voltages than the specified minimum will not damage the unit
Isolation	2250VDC input to chassis 4300VDC input to output 8mm spacing 1000VDC output to chassis
Charging Current and Voltage	135Vdc ± 0.5V/16A float voltage 2500W continuous Equalize timer with push button activation for 141Vdc Other voltages on request The output is floating, either terminal can be grounded
Output Separation Diode	Installed internally on each power module
Efficiency	Min. 80% at full load
Line / Load Regulation	± 1% combined from zero load to full load including output separation diodes
Dynamic Response	Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time
Output Ripple/Noise	Better than 1% of output voltage peak to peak or 0.2% RMS of the output voltage (20MHz BW)
Output Overload Protection	Rectangular current limiting with short-circuit protection Thermal shutdown with automatic reset in case of insufficient cooling (self-resetting) Current Limit set to: 17A ± 0.8A Charger output is protected against reverse battery connection by builtin crossbar diode and output breaker Warning: Battery must be fused externally, directly at the battery
Output Overvoltage Protection	Double regulator loop. Second regulator loop, completely stable and independent of main regulator loop. OVP setting: 155V ±5V
EMI	Meets EN 55022 Class A as minimum
Switching Frequency	55kHz ± 3kHz
Operating Temperature Range	-40° to +70°C for full specification
Humidity	5 - 95% non-condensing
Temperature Drift	0.03% per °C over operating temperature range
Cooling	By convection via louvers on the cabinet
Environmental Protection	Basic ruggedizing, Conformal coating
Shock/Vibration	IEC 61371 Cat 1 A&B
Dimensions	610 x 203 x 610 mm Wall-mounted case with louvers
Connections	Input/output terminals: Phoenix 6-10/2 terminals Cable entries via two feed through bushings at the bottom of the enclosure
Weight	15 Kg
Standards	Designed to meet EN 60950 and corresponding UL/CSA standards
MTBF	150,000 hours at 45°C per module, which are in redundant configuration Demonstrated MTBF significantly higher
Indicators	Internal green 'OUTPUT ON' indicator for each module (five LEDs) for verification of operation
Output Control	Equalize timer (141Vdc) with 1-9 hour timing, Push buttons for ON/OFF control
Alarm output	None, Available as option
RoHS Compliance	Fully compliant
Warranty	Two years subject to application within good engineering practice

Available from:

RIPEnergy®

The power conversion company

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Version 1.02.10