

SAMPLE SPECIFICATION FOR 63 BATTERY POWER SYSTEM

General

The Battery Power System (BPS) supplies nonstop DC power to critical loads requiring a well-filtered output. System elements include a filtered rectifier/charger, VRLA battery, load control equipment and a weatherproof housing.

Power Circuit Description

Phase-controlled full-bridge rectification using SCRs. Battery and rectifier/charger output are connected in parallel and supply a low voltage load disconnect. The load disconnect removes the load from the battery when battery voltage drops below the 1.75 volts per cell, and it automatically reconnects it when battery voltage measures over 2.1 volts per cell.

Mechanical Configuration

Rectifier/charger and battery are in different compartments of the same cabinet.

Output

Output voltages 12, 24 or 48 volts nominal.

Output current

6, 12 or 25 amps. (Max current per 48V rectifier/charger is 12 amps). Current limit is made at the factory and cannot be changed in the field. Dual rectifiers/chargers of the above capacities can be accommodated for either higher current or for redundancy.

Output regulation

The temperature-compensated output voltage remains within \pm 1% of the correct level for any load current over the input voltage and frequency range specified

Output Voltage Temperature Compensation

The output voltage is temperature compensated to .18% per degree Celsius. Battery temperature sensing is accomplished by a sensor located in the battery compartment. In case of a sensor failure or disconnection, sensing automatically reverts to a sensor located on the control card.

Voltage Sensing

Voltage sense is at the output terminals.

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Current Limit

The output is electronically limited to between 100% and 105% of rated output.

Input

Rated Input Voltage 115/230 volts <u>+</u>10%, 47-63 Hz, field selectable.

Soft Start (current walk-in)

Upon application of AC power, the rectifier/charger is governed so that output increases gradually to full power, or to a lesser amount as demanded by the load, over a period of approximately 10 seconds.

Protection

Current Limit Electronic current limit protects from overload and short circuit under normal conditions.

Fault Protection

- Two-pole input breaker.
- Two-pole rectifier/charger output breaker.
- Two-pole battery breaker.

High Voltage Shutdown (HVS)

Protects against overcharging should the rectifier/charger malfunction. Activates if output voltage exceeds a factory adjusted value. After shutdown, the rectifier/charger will start again after battery voltage drops below nominal.

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