100-800 amp, +24 VDC Integrated Power System with 100 amp Rectifiers

Key Features

- **400 amps Per Shelf**—300 amps plus 100 amps of redundant current in one shelf or 700 amps plus 100 amps of redundant current in two shelves
- **Battery System**—up to 640 AH of reserve power available in the 7' (2.13m) rack
- **Maximum Power**—800 amps
- **N+1 Redundancy**—eliminates costly backup equipment
- **Front Access Design**—most effective use of floor space

Description

The Lorain® integrated modular power system is designed to meet a wide range of wireless site requirements. This space-efficient system features compact system components and high density rectifier modules that reduce space requirements.

Distribution is simplified with a compact, well configured cabinet with circuit breaker kits that provide full system protection. The circuit breakers are provided to reliably protect the various equipment at the cell site. Fifty two +24 V breaker positions are provided for the +24 V equipment as well as ten -48V-GMT-fuse positions. Insulated circuit breaker positions enable ease of additions or changeouts.

Application

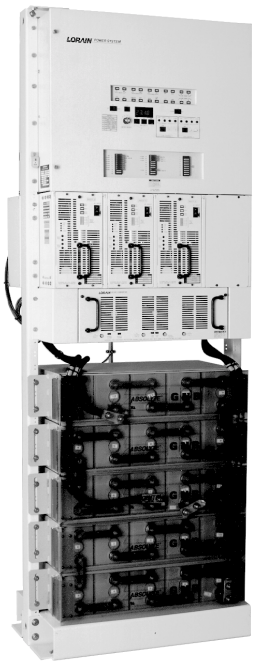
The Lorain modular cellular power system is ideal for smaller cell sites with limited space and increased capacity potential.

The System

The rack also serves as the control and monitoring center and features high visibility system status indicators, major and minor alarms, output alarm fuses and easy-to-read, six function digital meter. It is expandable up to two rectifier shelves and is front accessible with standard relay racks or cabinets. Space is available at the bottom half of the rack for 640 AH rack mount batteries thereby saving valuable floor space for revenue generating equipment.

Additional Information

For additional specification, engineering and installation information, request spec. number 581103800.



Marconi

100-800 amp, +24 VDC Integrated Power System with 100 amp Rectifiers

Rectifier Module Specifications

Design Technology: High frequency

Input

Voltage: 208 (184-220) VAC, single phase; 240 (212-254) VAC, single phase

Frequency: 50/60 Hz (47-63)

Protection: 2 pole circuit breaker (in module). If the input voltage falls below approximately 120 volts, the rectifier module power conversion circuitry inhibits, disabling module output. When the input voltage increases to approximately 130 volts, the module will automatically restart.

Output

Voltage:

Float — Adjustable from 24.0 to 29.0 VDC

Equalize — Adjustable from 24.0 to 29.0 VDC

Current: 100 amps, full load

Regulation: Steady state output voltage remains within ±0.5% in a 24.0 to 28.0 VDC range for any load current (no load to full load) within the specified input voltage and frequency ranges.

Filtering: When the rectifier module is connected to a 400 AH battery, the following specifications apply

Voice Band Noise — Less than 32dBrnC

Wide Band Noise — Does not exceed 250 mv peak-to-peak over a 10 Hz to 14 MHz frequency range

Protection

Current Limiting — Adjustable from 80% to 105% of full load.

High Voltage Shutdown — If the rectifier module voltage exceeds a preset value, the module will shut down. The high voltage shutdown range is 24 to 30 VDC.

Status/Alarm Indicators: Power-On LED; Fan-Failure LED; Rectifier-Failure LED; Rectifier- Current LED Bar Graph (10 amp increments)

Remote Float/Equalize: Remote location control only

Load Sharing: Programmed slope control

Current Walk-In: Output current gradually increases after rectifier is switched on

Remote On/Off: Rectifier on/off operation can be remotely controlled

Remote Emergency Shutdown: Input circuit breaker on rectifier module can be tripped open from a remote location

Environmental

Operating Temperature: -30° C to +60° C (-22° F to +140° F)

Storage Temperature: -40° C to +85° C (-40° F to +185° F)

Humidity: 0-95% relative humidity

Altitude: The maximum operating ambient temperature should be derated by 10° C (50° F) at 10,000' (3,048m) above sea level. For elevations between 10,000' (3,048m) and sea level, derate the maximum operating temperature linearly.

Heat Dissipation: 2172 Btu/hr, fan cooled front to rear

EMI/RFI Suppression: Conforms to FCC Rules Part 15, Subpart B for Class A computing devices

Audible Noise: 5' (1.524m) from any vertical surface does not exceed 65dBA

Physical Characteristics

Mounting: Plug-In installation into four-position Lorain Model A400CAB Rectifier Shelf

Dimensions:

Height: 12.19" (30.96cm)

Width: 6.25" (15.88cm)

Depth: 14.75" (37.47cm)

Weight: 37 lbs. (16.78 kgs)

Model A100B25
100 amp Rectifier Module

www.marconi.com/power
Marconi Communications
1122 F Street
Lorain, OH 44052
800-800-1280
Fax: 440-246-4876