

# 25-75 amp, -48 VDC Rectifier System with 25 amp Rectifiers

## Key Features

- **Modular Design**—means on-site configuration to your current and future needs
- **High Density Technology**—adds up to more power in less space
- **Environmentally Hardened**—for dependable operation over a broad temperature range
- **Temperature Compensated Models**—can be specified to extend battery life
- **Thermal Current Limit**—eliminates total shutdown and unnecessary maintenance response under extreme temperature conditions
- **UL and CSA Listed**—compliance with local codes
- **Alarm Module**—provides high voltage shutdown and restart control and AC failure, battery discharge and fuse failure alarms.

## Description

The Lorain® 25-75 amp, -48 VDC modular rectifier cabinet can be quickly field configured to cover a wide range of power system capacity requirements. The lightweight, cabinets accept 25 amp rectifier modules without costly, time consuming system shutdown. These systems provide smooth, regulated -48 VDC, 25 to 75 amp power from a nominal 208/240 VAC, single phase source.

The 50 amp system will accept two 25 amp rectifier modules in a standard 19" (48.26cm) cabinet. The 75 amp system accepts three 25 amp modules in a standard 23" (58.42cm) cabinet. Both cabinets use only 7" (17.78cm) of vertical rack space.

Temperature compensation modules can be included to extend battery life.

## Application

The Lorain 50 and 75 amp modular rectifier systems are ideal for a range of applications that include remote terminals, central office, customer premise, CEVs and special service use.

## Battery Charge Temperature Compensation Module

The external mounted battery charge temperature compensation module is designed to lower the battery float voltage provided by the rectifier(s) as battery ambient temperature increases. As battery and ambient temperature increases, battery float current normally increases. By lowering the rectifier output voltage to the battery, normal float current is restored.

## Additional Information

For additional specification, engineering and installation information, specify model and spec. number as follows:

Model A50CAB, 25 & 50 amp, spec. number 588243800 (without temperature compensation); spec. number 588245100 (with temperature compensation); model number A75CAB, 25 - 75 amp, spec. number 588243900 (without temperature compensation).



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## Rectifier Module Specifications

Design Technology: High frequency

### Input

Voltage: 208/240 (176-264) VAC, single phase

Frequency: 50/60 Hz (47-63)

Protection: 2 pole circuit breaker (in module). If the input voltage falls below approximately 150 volts, the rectifier module power conversion circuitry inhibits, disabling module output. When the input voltage increases to approximately 176 volts, the module will automatically restart.

### Output

Voltage:

Float — Adjustable from 46.0 to 57.0 VDC

Equalize — Adjustable from 0 to 2.5 VDC above float voltage

Current: 25 amps, full load

Regulation: Steady state output voltage remains within  $\pm 0.5\%$  in a 46.0 to 57.0 VDC range for any load current (no load to full load) within the specified input voltage and frequency ranges.

### Protection

Current Limiting — Automatic, limits current to 25.5 to 30.0 amps.

High Voltage Shutdown — If the rectifier module voltage exceeds a preset value, the module will shut down. The high voltage shutdown range (adjustable) is 52 to 60 VDC.

### Status/Alarm Indicators

AC On LED or Fan Failure LED

Rectifier Failure: AC On LED

Remote/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:  $-40^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $+149^{\circ}\text{F}$ )

Storage Temperature:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $+185^{\circ}\text{F}$ )

Humidity: 0-95% relative humidity

Altitude: The maximum operating ambient temperature should be derated by  $10^{\circ}\text{C}$  at 10,000' (3,048m) above sea level. For elevations between 3,000' (914.4m) and 10,000' (3,048m), derate the maximum operating temperature linearly.

Heat Dissipation: 703 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' (1.52m) from any vertical surface does not exceed 65dBA

### Physical Characteristics

Mounting: Plug-In installation

Dimensions:

Height: 7" (17.78cm)

Width: 5.84" (14.84cm)

Depth: 12" (30.48cm)

Weight: 15 lbs. (6.8 kgs)

Color: Off-White



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