

10-60 amp, -48 VDC Power System with 10 amp Rectifiers

Key Features

- **50 amp Redundancy**—in only 7" (17.78cm) of vertical rack space
- **10 amp Modular Power Cards**—can be added without costly system shutdown
- **Temperature Compensation Module**—extends battery life (system spec. number 588243700 only)
- **Quiet Fan Cooling**—cooling fan modules are inserted to match the output capacity, assuring proper ventilation and system reliability
- **UL Listed**—compliance to local codes

Description

The Lorain® MZ60CAB modular power system can be configured to a 30 amp (120 VAC input) or 60 amp (240 VAC input) capacity in -48 VDC applications. The unit features simple plug-in 10 amp rectifier cards for expanding capacity or field service replacement without system shutdown.

The flexible modular design provides up to 50 amp redundancy in 7" (17.78cm) of rack space, eliminating the need for an additional 50 amp unit. Should a single 10 amp card fail in a 60 amp configuration, the remaining rectifier cards will handle the 50 amp load requirement. Spare rectifier circuit cards can be kept on hand as an added safeguard.

Proper ventilation is assured with three fan modules that can be easily inserted to match capacity cooling requirements.

Battery life is increased with a remotely mounted temperature compensation module which controls the rectifier output voltage (system spec. number 588243700 only).

Other features include overvoltage shutdown, rectifier failure alarm, fan failure alarm, reverse battery polarity hookup alarm and a series output diode that allows the rectifier cabinet to be paralleled with like rectifier cabinets for added system capacity.

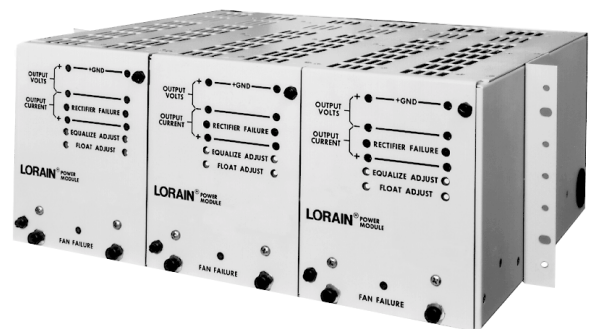
The cabinet is designed for 19" (48.26cm) relay rack installation with reversible mounting adapters for 23" (58.42cm) relay rack mounting.

Application

This unit is ideal for a wide range of communication power applications that include central office, digital loop carrier, remote terminal sites, customer premise and special service power requirements.

Additional Information

For additional specification, engineering and installation information, specify model MZ60CAB, spec. number 588242000 (without temperature compensation); spec. number 588243700 (with temperature compensation).



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Specifications

Input

Voltage: 120/240 (107-127/184-254) VAC, single phase

Frequency: 50/60 (47-63) Hz

Current (Nominal Line, Full Load):

7.8 amps (1 rectifier card, 120 VAC)

22.5 amps (3 rectifier cards, 120 VAC)

5.2 amps (1 rectifier card, 240 VAC)

25.0 amps (6 rectifier cards, 240 VAC)

Output

Voltage: 48 to 55 VDC, positive ground

Current: 10 amps (1 rectifier card), 60 amps (6 rectifier cards)

Filtering (without battery): Voice band noise does not exceed 29dBnC. Wide band noise does not exceed 250 mV over the 10 to 14 MHz range.

Protection

Current Limiting: Output current is limited to 110% \pm 10% of full load

Overvoltage Shutdown: If rectifier output voltage exceeds a preset value, the rectifier circuit card will shut down. If two or more rectifier circuit cards are operating in parallel, only the malfunctioning card is shut down.

System Alarms/Indicators: Rectifier failure, fan failure, reverse battery polarity, and audible alarm.

Paralleling: The output can be connected in parallel with the output of other MZ Series rectifier cabinets having the same output voltage ratings.

Test Points: Front access test points are provided on each rectifier circuit card to measure output voltage and current. High voltage shutdown point can be adjusted by removing fan module.

EMI Suppression: Conforms to FCC Rules, part 15, Subpart B for Class A computing devices. EMI on output leads conforms to NEMA PE-7 1985 requirements.

Environmental

Temperatures:

Model MZ60CAB, spec. number 588242000

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

Start-up: -30° C to +50° C (-22° F to +122° F)

Operating: -40° C to +50° C (-40° F to +122° F)

Model MZ60CAB, spec. number 588242600

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

Start-up: -30° C to +65° C (-22° F to +149° F)

Operating: -40° C to +65° C (-40° F to +149° F)

Humidity: 0% to 95% relative humidity, non-condensing

Altitude: Sea level to 10,000' (3,048m)

Ventilation: Fan cooled. Cabinet should be positioned so that ventilation is not blocked and air temperature entering the cabinet does not exceed the maximum specified operating temperature.

Audible Noise: Does not exceed 60 dBA 5' (1.52m) from any vertical cabinet surface.

Physical Characteristics

Mounting: This rectifier is furnished with reversible mounting angles for 19" (48.26cm) or 23" (58.42cm) mounting.

Dimensions:

Height: 6.97" (17.70cm)

Width: 19" (48.26cm) adaptable to 23" (58.42cm)

Depth: 14.97" (38.02cm)

Weight:

Cabinet: Net 22 lbs. (9.98 kgs)

Shipping 26 lbs. (11.79 kgs)

Rectifier circuit card: Net 6 lbs. (2.72 kgs)

Shipping 8 lbs. (3.63 kgs)

Fan module: Net 4 lbs. (1.81 kgs)

Shipping 6 lbs. (2.72 kgs)

Temperature compensation module:

Net .31 lbs. (.14 kgs)

Shipping 2 lbs. (.91 kgs)



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