2-8 amp, -48 VDC Power System with 2 amp Rectifiers and Battery Backup

Key Features

- **Modular Design**—easy to configure, maintain and expand
- **Compact, Lightweight Cabinets**—permits one person installation in limited space
- **Temperature Hardened**—dependable operation in harsh environments
- **Low Voltage Disconnect**—provides complete load and battery protection
- **Wall or Rack Mounting**—adaptable to all types of site configurations
- **Optional Batteries**—covers a wide range of loads and reserve times
- **Local and Remote Alarms**—continuously monitors complete system status

Description

The Lorain® A8CAB/BD power system is comprised of a modular lightweight -48 VDC, 2-8 amp rectifier cabinet with optional battery cabinets. Systems can be specified in a variety of configurations to suit your specific power requirements.

The rectifier cabinet is arranged to accept up to four 2 amp rectifier modules that supply 48 VDC load current while float charging a standby battery. If commercial power fails, the battery immediately supplies load current. Six GMT fuse positions are provided for individual load protection. Local and remote indicators provide status for AC, rectifiers, load and battery. The cabinet is equipped with an IEC 320 socket arranged for 120/220 VAC 50/60 HZ commercial power.

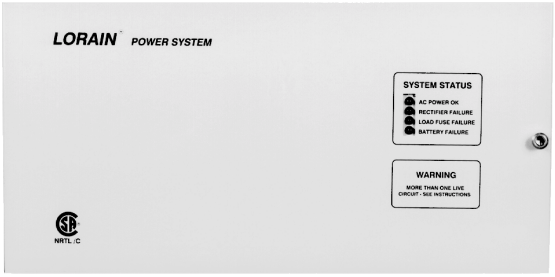
Battery cabinets can be specified in 7 or 12 amp hour capacities. Multiple or larger batteries can be provided where longer reserve times are required. Each battery is protected by an internal fuse and a low voltage disconnect is included to protect battery and load.
Units are designed to mount adjacent to the equipment being powered and connectorized cables can be supplied to simplify on-site installation.

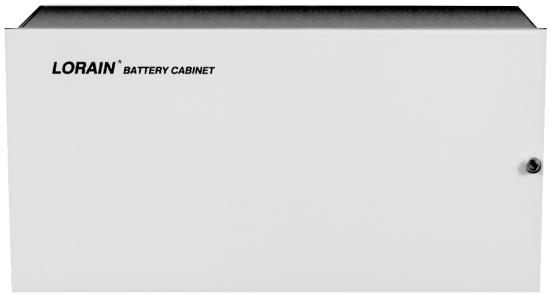
Application

The A8CAB/BD is designed to supply primary or backup DC power to communications equipment installed in remote cabinets or for customer premises applications. Specific applications include: microwave PBX, key systems, multiplexers, PCS equipment, FITL electronics and alarm or security circuits.

Additional Information

For additional specifications, engineering and installation information, specify 5882-470-00 instruction manual (section CF5399).





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Rectifier and Cabinet Specifications

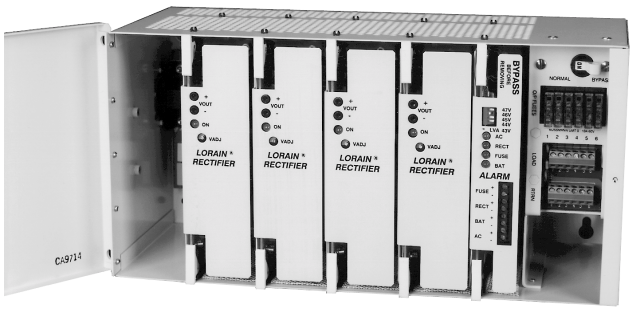
Input
Voltage: 120/220 VAC, single phase
Range: 90-132/180-264 VAC
Frequency: 50/60 Hz (47-63 Hz)
Connection: IEC 320 receptacle detachable cordset, 6' (1.83 m)

Output
Voltage: 52-58 VDC (set at 54.8 V)
Regulation: ± 1% over line and load variations
Voltage/Drift: ± 0.25% max. over 8 hours at constant line and load
Filtering: Less than 30 mV rms

System Configuration	Load Current	Operating Temperatures
1 Rectifier	1.5 amps	-40 to +65° C (-40 to +149° F)
	2.0 amps	-40 to +50° C (-40 to +122° F)
4 Rectifiers	6.0 amps	-40 to +50° C (-40 to +122° F)
	8.0 amps	-40 to +50° C (-40 to +122° F)

Note: Above ratings are based on convection cooling. With 210 CFM (5.95 cu.m/min) air flow, rectifiers will deliver 2 amps per card at +65° C (+149° F).

Protection
AC Input: 5 amp fuse per rectifier
DC Output: (6) 0-5 amp GMT fuses
Battery: 10 amp GMT fuse
Rectifier: Thermal current limit
High voltage shutdown: 59 VDC



Alarm and Controls
Visual: AC OK (green), Rectifier Fail (Red), Battery Fail (Red), Load Fuse Fail (Red)
Remote Alarms: AC Fail; Rectifier Fail; Battery Alarm; Load Fuse Alarm
Remote alarms are floating transistor switch contact. Option provided to extend -48 V return on alarm. LVA preset at 46 V, switch selectable 43-47 V LV disconnect at 42 V, reconnect at 47 V.
Internal LVD maintenance bypass switch.
Test points to measure rectifier voltage.

Environmental
Operating Temperature: -40° C to +65° C (-40° F to 149° F)
Storage Temperature: -40° C to +85° C (-40° F to +185° F)
Humidity: 0-95%, noncondensing
Altitude: Sea level to 10,000' (3048 M)
Ventilation: Bottom to top convection, optional fan cooling
Audible Noise: Less than 45 dBA measured 5' (1.52 M) from any surface
EMI: FCC part 15 subpart B class A
Surge Protection: ANSI/IEEE C62.41 1980 Category B
Seismic: Designed for NEBS Zone 4

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Rectifier and Cabinet Specifications (continued)

Cabinet	Height	Width	Depth	Weight
Rectifier	7.0" 177.80 mm	14.0" 355.60 mm	6.0" 152.40 mm	7.0 lbs. 3.2 kgs
7 AH Battery	7.0" 177.80 mm	14.0" 355.60 mm	6.0" 152.40 mm	34.5 lbs. 15.65 kgs.
12 AH Battery	9.75" 247.65 mm	14.0" 355.60 mm	6.0" 152.40 mm	47.5 lbs. 21.55 kgs.

All cabinets are front access only and are arranged for wall mounting. Optional 19" and 23" (58.42 cm) rack mounting kit available. Finish: Textured off-white

Safety Compliance

CSA Certification: CSA 22.2 Number 950

UL 1950

CE (pending)

Battery Information

Batteries

Capacity: @20 Hr rate and 25° C (77° F)

LO6: 12 AH (HE12V12.7 FR)

LO7: 7 AH (HE12V7.7 FR)

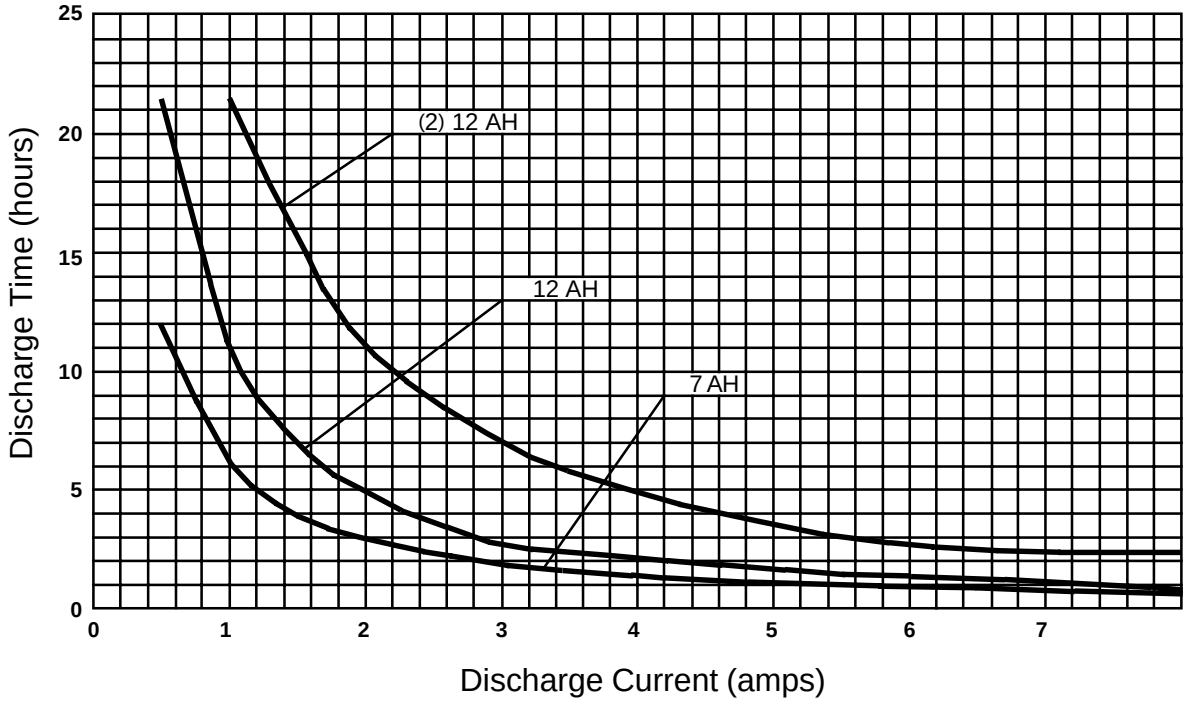
Type: Sealed VRLA

Fusing: 10 amp TPA-style GMT

Flammability: UL94 VO flame retardant case

Shelf Life: 6 months

Predicted Life: 3-5 years @ +25° C (77° F), 54.8-55.4 V



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Battery Information (continued)

Load Current (amps)		0.5	1.0	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0
Battery Type		Discharge Time (hours)									
List 07	7 AH	11.8	6	3.7	2.7	1.7	1.2	0.9	0.8	0.6	0.5
List 06	12 AH	21.4	11.3	7.2	5.1	2.9	2.4	1.8	1.4	1.2	1.0
2 x List 06	2 x 12 AH		21.4	15.7	11.3	7.2	5.1	3.7	2.9	2.5	2.4

Note: All data shown above is typical. Actual results will vary depending on battery and environmental conditions.

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

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