

Switchmode Utility Rectifier / Battery Charger 130VDC

The La Marche A96 provide highly reliable, hot swappable 130VDC power with full load sharing capability in a compact, modular rectifier system. At a height of only 4RU in a four across rack configuration it offers high power density. With current limiting circuitry, voltage regulation, high efficiency and high power factor, the A96 is the ultimate modular rectifier for Utility applications.

La Marche A96 systems provide highly filtered DC power which helps extend the life of the battery, and it can also be used as a power supply/battery eliminator. The loss of one rectifier will not affect the operation of the remaining rectifiers. Complete front panel accessibility and a hot plug-in design ensure quick, convenient, installation without the need to shut down the system.

The modules are available 208/240VAC input Ratings, with a frequency range of 45-66 Hz. Steady state output voltage remains within $\pm 0.5\%$ of the setting from no load to full load to handle charging today's diverse battery technologies.



A96 Cage shown above with four A96 Rectifiers

A96 Features

- Single Phase AC Input
- 130VDC High Frequency Switchmode Rectifier
- 90% Efficiency
- Compact, Modular System
- Power Supply/Battery Eliminator
- Hot Plug-In Design
- Power Factor Correction Circuitry
- Active Load Sharing
- Protection:
 - AC/ DC Power Out of Range
 - High Voltage Shutdown
 - Current Limit
 - Rectifier Current Walk-In
- Fan Cooling
- Adjustable Float & Equalize Voltage
- 4 Across Configuration
- 2 Year Warranty

Controller

- LCD Display
- Adjustable System Float & Equalize Voltage
- Alarms & Indicators

Communication Protocols

- 21Q** Modbus Communications (RS232/RS485/Ethernet)
- 21S** Modbus RTU (Serial Data Port)
- 21X** SNMP



	Model Number	DC Output		AC Input			Overall Dimensions W x D x H	Cable Entry		Mounting	Shipping Weight	
		Amps	Volts	AC Input Phase	Volts	Amps		AC Input	DC Output		lbs	kgs
Rectifier	A96-20-130-V1	20	130	1	208/240	15	5.25" x 14.5" x 7" 133 x 368 x 178 mm	---	---	---	14	6.4
Shelf	PC96-80-130V-23	Up to 80	130	1	208/240	Up to 60	21.38" x 25.85" x 7" 543 x 656.59 x 178 mm	REAR	REAR	23"	40	18.2

	Model Number	DC Output			Overall Dimensions W x D x H	Mounting	Shipping Weight	
		No. of Rectifiers	Amps	Voltage			lbs	kgs
Controller	C9623-80A-130V-01	Up to 4	Up to 80	130 VDC	23" x 3.075" x 6.97" 584.2 x 78.1 x 177mm	23" Rack/4RU	15	6.8
	C9623-160A-130V-01	Up to 8	Up to 160	130 VDC	23" x 3.075" x 6.97" 584.2 x 78.1 x 177 mm	23" Rack/4RU	15	6.8

INPUT

- **Input Voltage Range**
V1: 188-264VAC
- **Input Frequency Range**
45-66Hz
- **Power Factor**
Power factor correction circuitry corrects the input power factor to 0.99 at full-load.

FILTERING

- **Ripple Voltage**
With Battery Connected
< 30 mV RMS
Without Battery Connected
< 45 mV RMS

ADDITIONAL

- **Audible Noise**
Less than 54dBA at any point three feet from any vertical surface of the rectifier.
- **Cooling**
Fan Cooled

PROTECTION

- **Current Limit**
Maximum output current limited at 105% of its rated value.
- **Walk-In Circuit**
Output voltage will gradually increase after the charger is turned on, eliminating surges and over-shoot
- **High Voltage Shutdown (HVSD)**

ENVIRONMENTAL

- **Operating Temperature**
0°C (32°F) to 55°C (130°F)
- **Storage Temperature**
-40°C (-40°F) to 85°C (185°F)
- **Humidity**
0% to 95% relative humidity, non-condensing

CONTROLS

- **Float/Equalize Switch**
Rectifiers may be equalized locally via front panel switch.

OUTPUT

- **DC Output**
DC Volts: 130VDC
- **Efficiency**
90%
- **Regulation**
Dynamic response (with battery). Maximum voltage transient will not exceed $\pm 10\%$ of initial steady state voltage for a step change from 20% to 100% of the full rated load. Recovery to steady state voltage regulation range does not exceed 50ms and all transient behavior disappears within 100ms.
- **Steady State**
Typical output voltage is $\pm 0.5\%$ of the setting from no load to full load over the specified input voltage, and ambient temperature ranges.

A96 CONTROLLER SPECIFICATIONS



LED Indicators

- Fan Failure
- AC Failure
- Over-Temperature
- High Voltage Shutdown (HVSD)
- AC Available
- Current Limit
- Thermal Control
- DC Amps
- DC Volts
- Float
- Equalize
- Positive and Negative Ground

Alarm Relay Contacts 2 Form "C"

- High Voltage Shutdown (HVSD)
- Low DCA
- High DCV
- Low DCV
- AC Power Failure
- Summary
- Positive Ground*
- Negative Ground*

* 1 Set Form "C"