SBC Data Power Inc.
1760 Monrovia Avenue, Suite C8
Costa Mesa, Ca 92627
Ph 949 646 8191 www.sbcdatapower.com

23" A96 Cage shown above with four A96 rectifiers

## 130VDC Switchmode Utility Rectifier

The La Marche A96 provides 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 23" rack configuration it offers high power density. There is no need to shut down the system to change a rectifier. 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 possibility of wiring errors.

Adverse power conditions do not affect the DC output. The AC input line regulation operates over a range of 188-264 volts, with a frequency range of 45-66 Hz. This allows it to be used with any 50/60 Hz, 208-240 volt service line, eliminating the need and expense of stocking different rectifiers for each input voltage. Steady state output voltage remains within ±0.5% of the setting from no load to full load to handle charging today's diverse battery technologies. A standard 23" Rack Mounted Power Cage can hold up to four 20 amp rectifiers which will provide a total of 80 amps of power.

## Standard Features

### Rectifier

- Single Phase AC Input
- 130 Volts DC, 20 Amps Per Rectifier
- 90% Efficiency
- Compact, Modular System
- Power Supply/Battery Eliminator
- Hot Plug-In Design
- Power Factor Correction Circuity
- Selective High Voltage Shutdown
- Active Load Sharing
- Current Walk-In
- Fan Cooling
- Adjustable Float & Equalize Voltage
- 4 Across Mounting in a 23" Configuration
- 2 Year Warranty

### Controller

- Rack Mount
- Adjustable System Float & Equalize Voltage
- Float/Equalize Switch
- Multi-Mode Equalize Timer
- Alarms & Indicators
- LCD Display

### Options

- 3 Across Mounting in a 19" Configuration
- AC & DC Breakers

### Communication Protocols

**21J** IEC61850

**21P** DNP 3.0 Communications RS232/RS485/Ethernet

**21Q** Modbus Communications RS232/RS485/Ethernet

**21S** Modbus RTU - Serial Data Port

**21X** SNMP



SBC Data Power Inc.
1760 Monrovia Avenue, Suite C8
Costa Mesa, Ca 92627
Ph 949 646 8191 www.sbcdatapower.com

**La Marche Mfg. (A U.S. Company)**
106 Bradrock Drive, Des Plaines, IL 60018
Tel: 847.299.1188 Fax: 847.299.3061
sales@lamarchemfg.com
www.lamarchemfg.com

| | Model Number | DC Output | | AC Input Phase | Nominal Current Draw @ 100% Load (Amps) | Overall Dimensions W x D x H | Cable Entry (when facing unit) | | Mounting | Shipping Weight | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Amps | Volts | | | | AC Input | DC Output | | lbs | kgs |
| Rectifier | A96-20-130-V1 | 20 | 130 | 1 | 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 | Up to 60 | 21.38" x 25.85" x 7" 543 x 656.59 x 178 mm | LEFT | RIGHT | 23" Rack/4RU | 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**
  188-264VAC
- **Input Frequency Range**
  45-66Hz
- **Power Factor**
  Power factor correction circuitry corrects the input power factor to 0.99 at full-load.

## OUTPUT

- **DC Output**
  DC Amps: 20 to 160 amperes
  DC Volts: 130VDC
- **Efficiency**
  90%
- **Regulation**
  Dynamic response (with battery). Maximum voltage transient will not exceed ±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 ±0.5% of the setting from no load to full load over the specified input voltage, and ambient temperature ranges.

## 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)**
- **AC Fuse**
  Each rectifier module is protected with an input fuse.

## ADDITIONAL

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

## CONTROLS

- **Float Voltage**
  130V Adjustable From 120-135V
- **Equalize Voltage**
  130V Adjustable From 130-144V

## FILTERING

- **Ripple Voltage**
  With Battery Connected
  < 30 mV RMS

  Without Battery Connected
  < 45 mV RMS

## 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

## 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*

### Float/Equalize Switch

- Rectifiers may be equalized locally via front panel switch

* 1 Set Form "C"