

ANALYTIC SYSTEMS

Power Conversion Solutions

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Battery Chargers / Rectifiers

BCA1000R Series AC Battery Charger (Rectifier)



Benefits

- Ultra-Quiet
- Power sensitive electronics without interference
- Rugged & Reliable
- Ensure years of safe and trouble free operation
- Fast & Accurate Charging

Applications

- Telecom Power Plants
- Electric Utilities and Substations
- Marine & other rugged environments
- Base Station Power (Radio & Telecommunications)
- Industrial Controls (OEM Applications)
- Solar / Alternative Power Systems
- Emergency Power Backup (UPS)
- Security Systems
- Charge any 12, 24, 32, or 48 Volt System

Description

The BCA1000R Rackmount Battery Charger (Rectifier)'s current mode switching design offers increased power and reliability in a compact package. The low ripple charging profile and standard equalize cycle greatly increases the lifetime of expensive battery systems.

Extra input and output filtering reduce EMI to extremely low levels. Reliability features include an input fuse, thermal shutdown, current limiting, reverse battery hookup protection and output short circuit shutdown with automatic recovery. The output voltage is easily adjusted 0.5 volts above or below the standard output voltage.

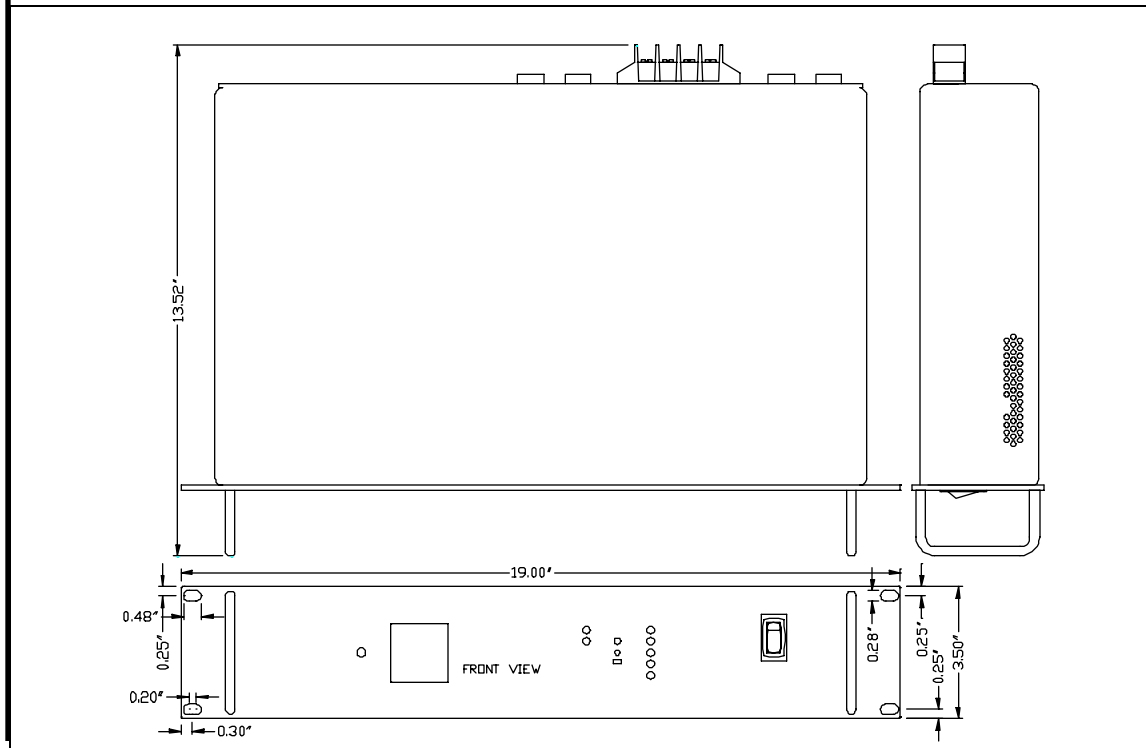
The model BCA1000R Battery Charger supplies either 12, 24, or 48 VDC from a 110 or 220 VAC power source (Field Convertible). A high quality Digital Volt/Ammeter allows the monitoring of charging current and charging voltage.

Features

- Adjustable output voltage for charging standard or deep cycle lead-acid, VRLA or Gel cell type battery
- Extremely rugged and well suited for marine and other demanding environments
- High tolerance for shock and vibration
- Charge 1 or 2 banks
- Equalize Function
- Battery Temp. Compensation
- Ultra-quiet low EMI operation
- Can be left permanently connected
- Can function as a power supply
- User selectable 2 or 3 stage charging profile
- Standard Digital Volt/Ammeter
- Audible & visual indicators for output overload, low input voltage, low output voltage & over-temperature
- Over-temperature shutdown
- Short circuit protection
- Output over-voltage crowbar
- Inrush Current Limiting with solid state bypass
- Thermostatically controlled cooling fan
- Dry contact output fail relay
- Custom output voltages available (8V to 55V)
- 3 year parts and labour warranty

BCA1000R Series Battery Charger (Rectifier)

Mechanical Diagram



Specifications

Electrical (Input)

| | | |
|------------------|----------|---------|
| Nominal Vac (ip) | 110 | 220 |
| Actual (Vac) | 105-125 | 210-250 |
| Input Amps (max) | 13.8 | 6.9 |
| Input Fuse (MDA) | 20A | 10A |
| Input Frequency | 45-65 Hz | |
| Noise on Input | < 50 mV | |

Environmental Specifications

| | |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Operating Temp. Range | -25° to +40°C @ maximum output Derate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide temp. operation avail.) |
| Humidity | 0 - 95°C Relative Humidity (non-condensing) with optional conformal coating |
| Audible Noise | NONE Ødb @ 3 ft (34.5 dB when fan operating) |
| Typical Service Life | > 10 yrs. (87,600 hrs) |
| Isolation | Input-Case & Input-Output 1500VDC Output-Case 500VDC |

Electrical (Output)

| | | | |
|--------------------------|--------------------------------------|-------------|-------------|
| Output Nominal (op) | 12 | 24 | 48 |
| Output Volts (DC) | 13.6 ± 0.05 | 27.2 ± 0.05 | 54.4 ± 0.05 |
| Absorption Voltage (Vdc) | 14.4 | 28.8 | 57.6 |
| Charging Amps | 60 | 40 | 20 |
| Absorption to Float | 6 Amps | 4 Amps | 2 Amps |
| Output Adjustment (Vdc) | ± 0.5V | | |
| Output Fuses (ATC) | 40 x 2 | 40 x 2 | 30 x 2 |
| Battery Banks | 1 or 2 (3 Bank Option Available) | | |
| Battery Size (Amp Hrs.) | 240 - 360 | 160 - 240 | 80 - 120 |
| Output Ripple & Noise | < 50 mV | | |
| Output Crowbar | 16.0 ± 0.5V | 32.0 ± 1.0V | 63.9 ± 2.0V |
| Transient Response | < 2V for a 50% Surge | | |
| Regulation (Line & Load) | < +/- 0.5% | | |
| Temperature Comp. | -30 mV/°C | -60 mV/°C | -120 mV/°C |
| Duty Cycle | Continuous 100% for 24 hours per day | | |
| Efficiency | > 75% @ Maximum Output | | |
| Stages | 2 or 3 | | |

Mechanical Specifications

| | |
|-------------|------------------------------------|
| Depth | 13.5 in |
| Width | 19" |
| Height | 2u (3.5 in.) |
| Clearance | 1 inch (2.5 cm) all around |
| Material | Marine Grade Aluminium |
| Finish | Black Anodize / Powder Epoxy Coat |
| Fastenings | All 18-8 Stainless Steel |
| Weight | 12.0 lb / 5.5 kg |
| Connections | Four contact output terminals |
| Warranty | 3 years |
| Safety | cETLus to UL1012 & CSA22.2 Pending |

Available From:



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Quality since 1976

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