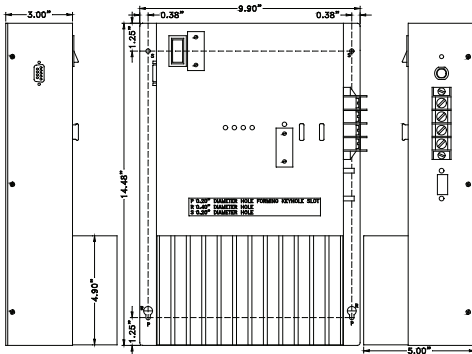


# ANALYTIC SYSTEMS

Power Conversion Solutions

## AC BATTERY CHARGER

**MODEL  
BCA1000**



## Description

The BCA1000 battery charger provides up to 1000 watts to charge a 12, 24, 32, 48 or 72 Volt battery system (1, 2 or Optional 3 banks) from a 110 or 220VAC source. The batteries must share a common ground.

This all-new single board design incorporates state of the art switch mode technology for unmatched efficiency and ultra-quiet operation. Multiple stages of filtering reduce radiated or conducted noise to very low levels. Extra features include adjustable output voltage, audible and visual indicators for low input voltage, low output voltage, over temperature and an equalize charging cycle. Safety features include charger and battery over-temperature shutdown, current limiting, short circuit protection with automatic recovery, input under voltage shutdown, reverse battery hook-up protection, a dry contact alarm relay output and output overvoltage crowbar.

Optional features include a Digital Volt/Ammeter, 3-Bank Charging, a Remote Control Panel, and/or a second Battery Temperature Sensor. We are confident that you will get many years of reliable service from this AC Battery Charger.

## Benefits

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

## Design Features

- Ideal as Global Marine Distress Safety System (GMDSS) power supply when equipped with optional voltmeter and ammeter.
- Adjustable output voltage for charging standard or deep cycle lead-acid, VRLA or Gel cell type battery
- Temperature compensated charging
- High tolerance for shock and vibration
- Ultra-quiet low EMI operation
- Can be left permanently connected
- Can function as a power supply
- Dry contact output fail relay
- User selectable 2 or 3 stage charging profile
- 3 Bank Option Available
- 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 fan
- 3 year parts and labour warranty

## Applications

- Marine & other rugged environments
- Automotive / RV
- Electric Utilities and Substations
- Base Station Power (Radio & Telecommunications)
- OEM Applications
- Field Work / Construction Sites
- Solar Power Systems
- Emergency Power Backup (UPS)
- Security Systems
- Charge any 12, 24, 32, or 48 Volt Battery System

An ISO9001 and AS9100 Registered Company Battery Chargers • Inverters • Power Supplies • Voltage Converters

8128 River Way, Delta B.C. V4G 1K5 Canada T. 604.946.9981 F. 604.946.9983 TF. 800.668.3884 (US/CANADA)

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# AC BATTERY CHARGER

# MODEL BCA1000

## Electrical (Input)

Nominal (ip)	110	220
Actual (Vac)	90-130	180-260
Input Amps (max)	17	8.5
Input Fuse (MDA)	20A (12V) 25A all others	10A (12V) 15A all others
Input Frequency	45-65 Hz	
Noise on Input	< 50mV	

## Electrical (Output)

Output Nominal (op)	12	24	32	48	72
Output Volts (DC)	13.6 ± 0.05	27.2 ± 0.05	36.3 ± 0.05	54.4 ± 0.05	81.6 ± 0.05
Absorption Voltage (Vdc)	14.4	28.8	38.4	57.6	86.4
Charging Amps	60	40	30	20	13
Absorption to Float (15%)	9.0 Amps	6.0 Amps	4.5 Amps	3.0 Amps	2.0Amps
Output Adjustment (Vdc)	± 1.0V				
Output Fuses (ATC)	40 x 2	40 x 2	40 x 2	25 x 2	15 x 2
Battery Banks	1 or 2 ( 3 Bank Option Available)				
Battery Size (Amp Hrs.)	240 - 360	160 - 240	120 - 180	80 - 120	50-80
Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V	42.7 ± 1.3V	63.9 ± 2.0V	95.9± 4.0V
Output Ripple & Noise	< 50 mV				
Regulation (Line & Load)	< +/- 0.5%				
Temperature Comp.	-30 mV/°C	-60 mV/°C	-80 mV/°C	-120 mV/°C	-180 mV/°C
Duty Cycle	Continuous 100% for 24 hours per day				
Efficiency	> 75% @ Maximum Output				
Stages	2 or 3 (user selectable)				

## Environment Specification

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% Relative Humidity (non-condensing) with optional conformal coating
Audible Noise	NONE Ødb @ 3 ft
Typical Service Life	> 10 yrs. (87,600 hrs)
Isolation	Input-Case & Input-Output 1500VDC Output-Case 500VDC (1500V @ 48V Output)

## Mechanical Specification

Length	14.5 in / 36.8 cm
Width	9.9 in / 25.1 cm
Height	5.0 in / 12.7 cm
Clearance	1 inch (2.5 cm) all around
Material	Marine Grade Aluminium
Finish	Black Anodize / Powder Epoxy Coat
Weight	12.0 lb / 5.5 kg
Fastenings	All 18-8 Stainless Steel
Connections	Four contact output terminals
Warranty	3 years
Safety	Built to meet UL458 & CSA22.2.107.1

Note: Specifications are subject to change without notice.



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