

AC Battery Chargers

BCA1000-MS C.O.T.S. Battery Charger



Benefits

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



Military Option

Most of the products manufactured by Analytic Systems can be adapted for military use (Commercial Off The Shelf).

We provide four different levels of ruggedization; most often, a product in military use will use the extra-wide temperature range components to allow operation to -55 degrees Celsius.

The printed circuit boards are also protected against condensation and are enhanced with vibration protection that meets or exceeds MIL-STD810F, Method 514-3 and Cat-1 Proc 1.

C.O.T.S. products are designed to meet various levels of EMC radiated and conducted emissions MIL-STD 461E.

All C.O.T.S. products are manufactured in accordance with IPC-A-610.

Description

The BCA1000 battery charger provides up to 1000 watts to charge a 12, 24, 28, or 48 Volt battery system (1 or 2 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 both charger and battery over-temperature shutdown, current limiting, short circuit protection with automatic recovery, input undervoltage shutdown, reverse battery hook-up protection, a dry contact alarm relay output and output overvoltage crowbar.

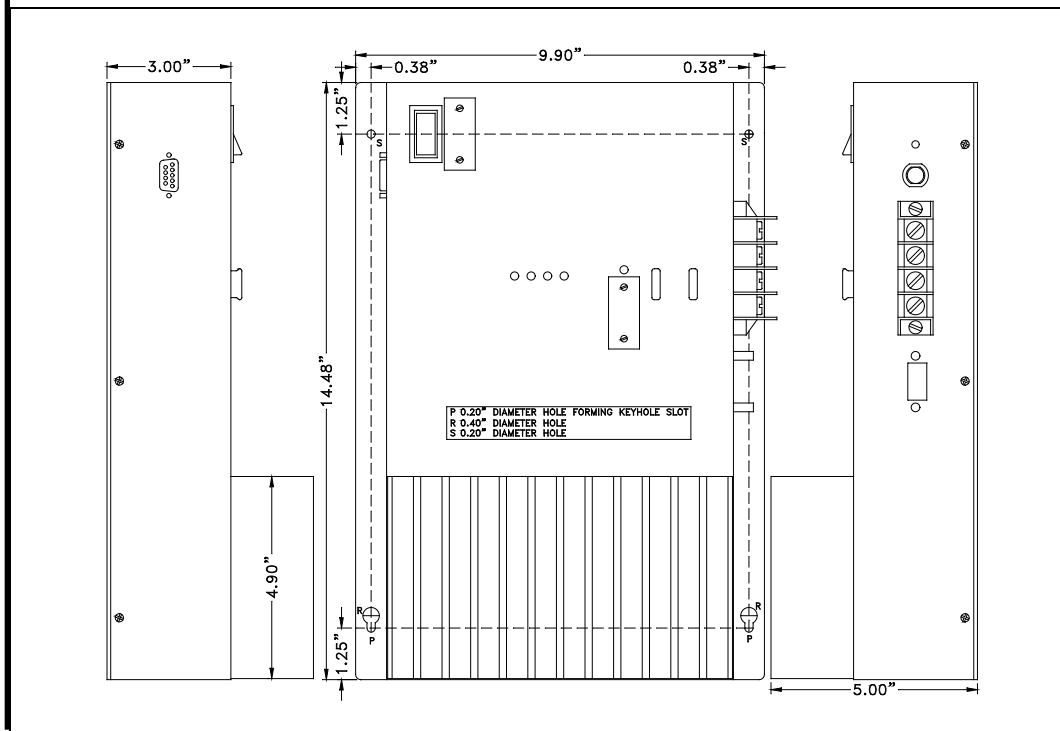
Optional features include a Digital Volt/Ammeter, 3-Bank Charging, a Remote Control Panel, and/or a second Battery Temperature Sensor. We are confident that you will get many years of reliable service from this AC Battery Charger.

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
- Field switchable between 110VAC and 220VAC
- 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

BCA1000-MS Series C.O.T.S. Battery Charger

Mechanical Diagram



Specification

Electrical (Input)

Nominal Vac (ip)	110	220
Actual (Vac)	105-125	210-250
Input Amps (max)	14.6	7.3
Input Fuse (MDA)	20A(15A-12V)	10A(8A-12V)
Input Frequency	45-65 Hz	
Noise on Input	< 50 mV	

Environmental Specification

Operating Temp. Range	-55° to +50°C @ maximum output Derate Linearly 2.5% per °C from 50°C
Humidity	0 - 95°C Relative Humidity (non-condensing) with standard 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 (1500VDC @ 48V O/P)

Electrical (Output)

Output Nominal (op)	12	24	28	48
Output Volts (DC)	13.6	27.2 (24.0 Avail)	28.0	54.4
Absorption Voltage (Vdc)	14.4	28.8	29.6	57.6
Charging Amps	60	40	40	20
Absorption to Float (15%)	9 Amps	6 Amps	6 Amps	3.0 Amps
Output Adjustment (Vdc)	± 1.0V			
Output Fuses (ATC)	40 x 2	40 x 2	40 x 2	25 x 2
Battery Banks	1 or 2 (3 Bank Option Available)			
Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V	42.7 ± 1.3V	63.9 ± 2.0V
Battery Size (Amp Hrs.)	240 - 360	160 - 240	120 - 180	80 - 120
Output Ripple & Noise	< 50 mV			
Regulation (Line & Load)	< +/- 0.5%			
Temperature Comp.	-30 mV/°C	-60 mV/°C	-80 mV/°C	-120 mV/°C
Duty Cycle	Continuous 100% for 24 hours per day			
Efficiency	> 75% @ Maximum Output			
Stages	2 or 3 (user selectable)			
EMC	Designed to meet MIL-STD 461E			

Mechanical Specification

Length	14.5 in / 36.8 cm
Width	9.9 in / 25.1 cm
Height	5.5 in / 14.0 cm
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
Vibration	Designed to meet MIL-STD810DF, Method 514-3 and Cat-1 Proc 1
Interconnect	IPC-A-610
Warranty	3 years

Available From: