



AC Battery Chargers

BCA310-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 are designed to meet or exceed MIL-STD810F, Method 514-3 and Cat-1 Proc 1. C.O.T.S.

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

Description

The BCA310-MS Battery Charger provides up to 300 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 switchmode 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.

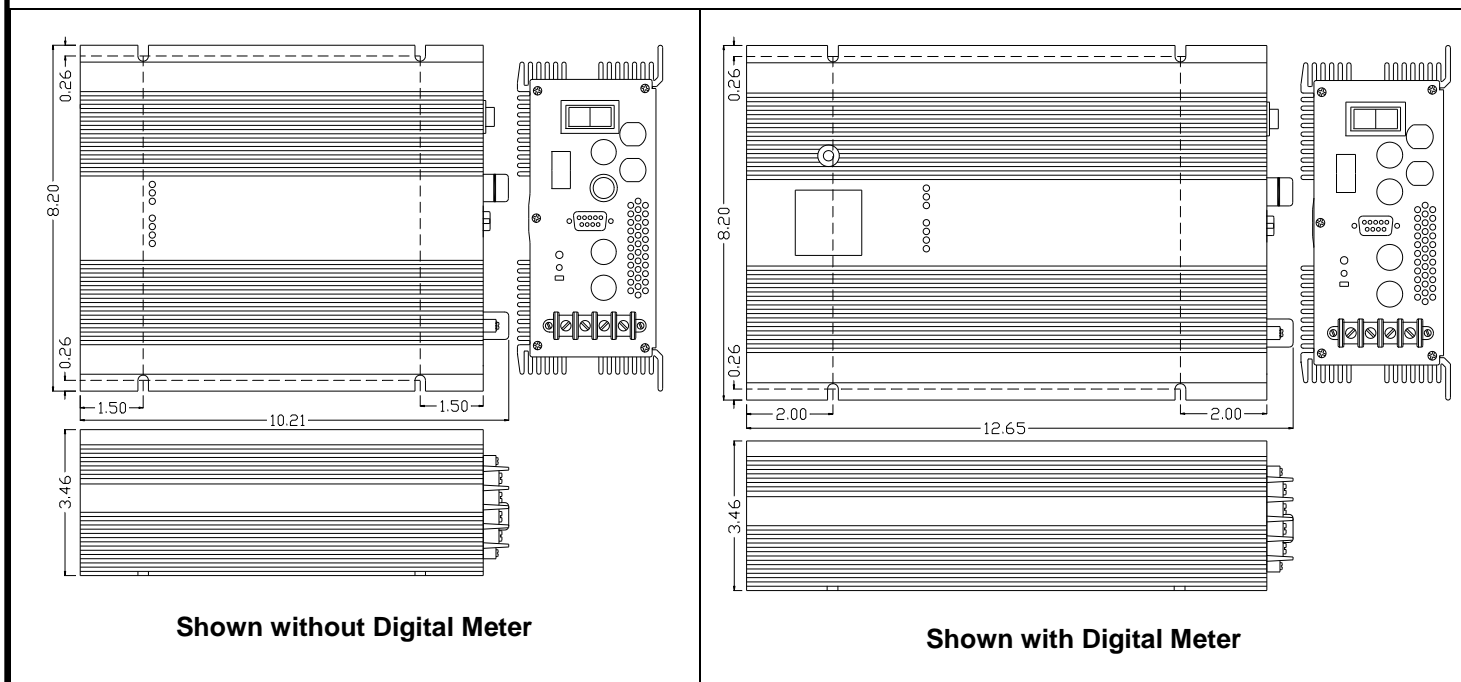
Optional features include a Digital Volt/Ammeter, 3-Bank Charging, a Remote Control Panel, and/or a second Battery Temperature Sensor. We are confident that you will get many years of reliable service from this AC Battery Charger.

Features

- 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
- Ultra-quiet, low EMI operation
- Can be left permanently connected
- Can function as a power supply
- User selectable 2 or 3 stage charging profile
- Field switchable between 110VAC and 220VAC
- Audible & visual indicators for output overload, low input voltage, low output voltage & over-temperature
- Over-temperature shutdown
- Temperature compensated charging
- Short circuit protection
- Output over-voltage crowbar
- Inrush Current Limiting with solid state bypass
- Dry contact output fail relay
- 2 year parts and labour warranty

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Mechanical Diagram



Shown without Digital Meter

Shown with Digital Meter

Specification

Electrical (Input)

Nominal (ip)	110	220
Actual (Vac)	105-125	210-250
Input Amps (max)	3.7	1.8
Input Fuse (MDA)	5A	3A
Input Frequency	45-65 Hz	
Noise on Input	< 25 mV	

Environmental Specification

Operating Temp. Range	-40° to +55°C @ maximum output Derate Linearly 2.5% per °C from 55°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	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	20	10	10	5
Absorption to Float (15%)	3.0 Amps	1.5 Amps	1.5 Amps	0.75 Amps
Output Adjustment (Vdc)	± 1.0V			
Output Fuses (AGC)	25 x 1	15 x 1	10 x 1	10 x 1
Battery Banks	1 or 2 (3 Bank Option Available)			
Battery Size (Amp Hrs.)	80-120	40-60	30-45	20-30
Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V	42.7 ± 1.3V	63.9 ± 2.0V
Output Ripple & Noise	< 25 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)			

Mechanical Specification

Length	9.6 in / 24.4 cm
Width	8.2 in / 20.8 cm
Height	3.5 in / 6.4 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	7.5 lb / 3.4 kg
Connections	Four contact output terminals
Vibration	Designed to meet MIL-STD810F, Method 514-3 and Cat-1 Proc 1
Interconnect	IPC-A-610
Warranty	2 years

Available From: