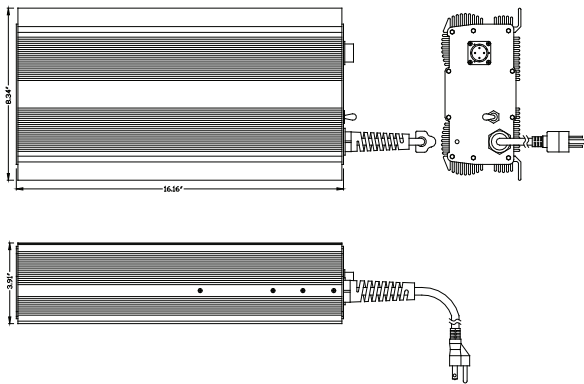


# ANALYTIC SYSTEMS

Power Conversion Solutions

## AC BATTERY CHARGERS MODEL BCA1510MS C.O.T.S. SERIES



### Description

The BCA1510 battery charger provides up to 700 watts to charge a 12, 24, or 28 Volt Military Electrical System from a 110 / 220VAC (Autoswitching) source.

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 to meet MIL461F. Extra features include visual indicators for output ON and charging (single dual brightness LED).

Safety features include over-temperature shutdown, current limiting, short-circuit protection with automatic recovery, input undervoltage shutdown and output overvoltage crowbar.

Optional features include a 3-Bank Load Splitter. 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 a COTS Power Supply for Military Applications
- Military-Grade extrusion ensures a high tolerance for shock and vibration
- Ultra-quiet, low EMI operation
- Can be left permanently connected
- Can function as a power supply
- 3 Bank Load Splitter Available
- Visual indicators for output and charging
- Short circuit protection
- Output over-voltage crowbar
- Inrush Current Limiting with solid state bypass
- 110/220 Vac auto-ranging input
- 2 years parts and labour warranty
- Designed to meet MIL-STD 810F, Method 514-3, Cat-I Proc I for vibration

### Military Features

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 461F.

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

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

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[www.analyticsystems.com](http://www.analyticsystems.com)

# AC BATTERY CHARGERS

# MODEL BCA1510MS C.O.T.S. SERIES

Electrical (Input)		
Nominal Vac (ip)	110 / 220 (Autoranging)	
Actual (Vac)	90-140	180-284
Input Amps (max)	16.2	8.1
Input Circuit Breaker	25A Magnetic	
Input Frequency	45-405 Hz	
Noise on Input	< 50 mV	
Electrical (Output)		
Output Nominal (op)	12	24
Output Volts (DC)	13.6	27.2 (24.0 and 28.0 Avail)
Charging Amps	52	26
Battery Banks	Dual output available	
Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V
Battery Size (Amp Hrs.)	400 – 600	200 – 300
Output Ripple & Noise	< 50 mV	
Regulation (Line & Load)	< +/- 0.5%	
Duty Cycle	Continuous 100% for 24 hours per day	
EMC	Designed to meet MIL461F	
Efficiency	> 75% @ Maximum Output	
Stages	2 Stage Constant Current to Constant Voltage	
Environment Specification		
Operating Temp. Range	40° to +55°C @ maximum output Derate Linearly 2.5% per °C from 50°C to 85°C (Optional pre-heater to allow -55°C operation available)	
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	Case & Input-Output 1500VDC / Output-Case 500VDC	
Mechanical Specification		
Length	17.0 in / 43.2 cm	
Width	8.2 in / 20.8 cm	
Height	3.5 in / 8.9 cm (without carrying handle)	
Clearance	1 inch (2.5 cm) all around	
Material	Marine Grade Aluminium	
Finish	Clear Chromate	
Fastenings	All 18-8 Stainless Steel	
Weight	14.4 lb / 6.6 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	

Note: Specifications are subject to change without notice.



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