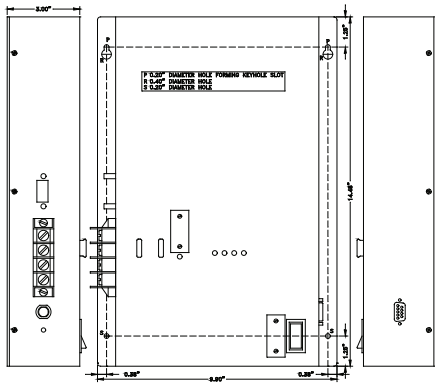


# ANALYTIC SYSTEMS

Power Conversion Solutions

## AC BATTERY CHARGERS

### MODEL BCA610MS C.O.T.S. SERIES



### Description

The BCA610-MS battery charger provides up to 600 watts to charge a 12, 24, 32, 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.

### Benefits

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

### Design 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 years parts and labour warranty

### 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. products are designed to meet EMC radiated and conducted emissions MIL-STD 461E.
- All C.O.T.S. products are manufactured in accordance with
- IPC-A-610.

# AC BATTERY CHARGER | MODEL BCA610MS C.O.T.S. SERIES

Electrical (Input)				
Nominal (ip)	110		220	
Actual (Vac)	105-125		210-250	
Input Amps (max)	8		4	
Input Fuse (MDA)	10A		5A	
Input Frequency	45-65 Hz			
Noise on Input	< 50 mV			
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	40	22	20	11
Absorption to Float (15%)	6 Amps	3.3 Amps	3 Amps	1.65 Amps
Output Adjustment (Vdc)	± 1.0V			
Output Fuses (ATC)	40 x 2	30 x 2	30 x 2	15 x 2
Battery Banks	1 or 2 (3 Bank Option Available)			
Battery Size (Amp Hrs.)	160 – 240	80 – 120	66 – 99	44 – 66
Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V	32.0 ± 1.0V	63.9 ± 2.0V
Output Ripple & Noise	< 50 mV			
Regulation (Line & Load)	< +/- 0.5%			
Temperature Comp.	-30 mV/°C	-60 mV/°	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			
Environment Specification				
Operating Temp. Range	-55° to +50°C @ maximum output Derate Linearly 2.5% per °C from 50°C			
Humidity	0 - 95% 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)			
Mechanical Specification				
Length	14.5 in / 36.8 cm			
Width	9.9 in / 25.1 cm			
Height	3.0 in / 7.6 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	7.2 lb / 3.3 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			



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

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