

- Adjustable charging voltage
- Single or two-bank charging
- Ultra-quiet low EMI operation
- Bright LED indicators
- Equalize mode functionality
- Rugged and reliable

**3 YEAR WARRANTY**



**BCA1000**  
**AC-SOURCE BATTERY CHARGER**

The BCA1000 family of COTS AC-source battery chargers are designed to charge a battery at 12, 24, 32, 48, or 72 (Rail) VDC from a standard 110 or 220 VAC source.

Internally, the single-board design incorporates time-tested switch-mode technology for unmatched efficiency and ultra-quiet operation. Additional stages of filtering on the outputs reduce conducted and radiated EMI noise to very low levels.

These units feature user-selectable 2-stage or 3-stage charging profiles and output voltage adjust for optimum charging. Additionally, the equalization mode and voltage temperature compensation increases the lifetime of expensive battery systems.

Built for rugged duty, these units are constructed from heavy-duty anodized extruded and billet machined aluminum with O-ring seals and all stainless-steel fasteners.

Reliability features of this product line include LED status indicators, over-temperature shutdown, current limiting, reverse polarity battery connection protection, output short circuit shutdown with automatic recovery and output over-voltage protection.

**Available models**

**Input**

110 VAC	220 VAC
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**Output**

12 VDC	24 VDC	32 VDC
48 VDC	72 VDC (Rail)	

**Applications**



# BCA1000 | AC-SOURCE BATTERY CHARGERS

## INPUT

Nominal Voltage	110 VAC	220 VAC
Actual Voltage	90-133 VAC	180-265 VAC
Frequency	45-65	
Input Amps (Max)	13 A	7 A
Input Fuse (Slow blow)	MDA-20	MDA-12

## OUTPUT

Nominal Voltage	12 VDC	24 VDC	32 VDC	48 VDC	72 VDC
Float Voltage	13.6 VDC	27.2 VDC	36.3 VDC	54.4 VDC	81.6 VDC
Absorption Voltage	14.4 VDC	28.8 VDC	38.4 VDC	57.6 VDC	86.4 VDC
Charging Amps	60 A	40 A	30 A	20 A	13 A
Output Fuses (parallel)	2x ATC-40	2x ATC-30	2x ATC-25	ATC-30	ATC-20
Absorption to Float Switch	9 Amps	6 Amps	4.5 Amps	3 Amps	1 Amp
Output Overvoltage Protection	16 ± 0.5V	32 ± 1V	42.7 ± 1.3V	63.9 ± 2V	102.0 ± 3V
Temperature Compensation	-30mV/°C	-60mV/°C	-80mV/°C	-120mV/°C	-180mV/°C
Equalize Voltage	15.5 VDC	31.0 VDC	41.3 VDC	62.0 VDC	93.0 VDC
Recommended Battery Size (Amp-hours)	240-360	160-240	120-180	80-120	30-130
Supported no. of Battery Banks	Single bank charging only	Charges up to two connected battery banks			
Output Volt. Adjust	+/- 1.0 V				
Charging Stages (Selectable)	2 Stage (CC-Float) or 3 Stage (CC-Absorption-Float), User-selectable				
Output Ripple & Noise	<50 mV				
Transient Response	<1V for 50% Surge				
Regulation (Line & Load)	< +/- 0.5%				
Duty Cycle	Continuous: 100% for 24 hours per day				
Efficiency	>75% @ Maximum Output				

## MECHANICAL

Length	14.5 in / 36.8 cm
Width	9.9 in / 25.1 cm
Height	5.0 in / 12.7 cm
Clearance	1.0 in / 2.5 cm all around
Weight	12.0 lb / 5.5 kg (approximate)
Material and Finish	Black anodized marine grade aluminum
Fasteners	18-8 stainless steel
Input Connection	3 m / 9.8ft 3xAWG14 power cord with NEMA 5-15 or CEE 7/VII compatible plug
Output Connection	Molex 4-pin BEAU Terminal Strip
Battery Temperature Sensor Connection	RJ45 'telephone jack' connector

## ENVIRONMENTAL AND SAFETY

Operating Temperature	-25°C to +40°C @ maximum output. Derate linearly 2.5% per °C from +40°C
Storage Temperature	-40°C to +100°C
Humidity	0 - 95% relative humidity (non-condensing) with standard conformal coating
Isolation	Input-Output & Input-Case: 1500 VDC Output-Case: 500 VDC (1500 VDC @ 48 V Out)
Cooling	Two interior thermostatic cooling fans
Audible Noise	0 dB @ 1 meter when fan operating
Typical Service Life	> 10 years (87,600 hrs)
Warranty	Three Years Parts and Labor
Safety	Designed to meet UL458 & CSA 22.2.107.1

## OPTIONS

**OPT-E:** RoHS Compliant

**OPT-G:** GMDSS Digital Meter & Remote

**OPT-P:** Portable (Folding Handle & Rubber Feet)

**OPT-U:** Safety Special Inspection (CSA/SPE-1000)

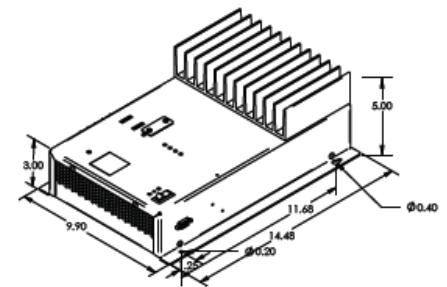
**OPT-V:** Digital Volt/Amp Meter

**OPT-X:** Ruggedization & Wide-Temp

**OPT-Y:** IP67 Certified, Ruggedization & Wide-Temp

**Custom Input/Output Available**

## DIMENSIONS



**ANALYTIC SYSTEMS**  
Power Conversion Solutions

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**Note:** Specifications are subject to change without notice.