ANALYTIC SYSTEMS
Power Conversion Solutions

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DC Battery Chargers

BCD310 Isolated Battery Charger

Benefits

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

Description

The BCD310 battery charger provides up to 300 watts to charge a 12 or 24 or 48 Volt battery system from a 110V, 220V or 300VDC source. The batteries must share a common ground but the source can be on a different positive or negative ground.

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, 3-Bank charging, low output voltage and over temperature. Safety features include reverse input protection, over-temperature shutdown, current limiting, short circuit protection with automatic recovery, input undervoltage shutdown, reverse battery protection, output overvoltage crowbar and a dry contact alarm relay output.

Optional features include a Digital Volt/Ammeter, 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 DC Battery Charger.

Applications

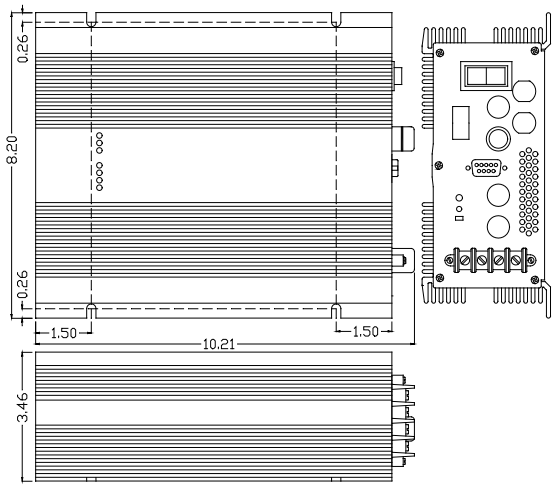
- Marine & other Rugged Environments
- Electric Utilities and Substations
- Manufacturing Plants
- Steel Mills
- Military Applications (COTS)
- Industrial Controls
- OEM Applications
- Solar / Alternative Power Systems
- Fuel Cells
- Charge any DC/DC System

Features

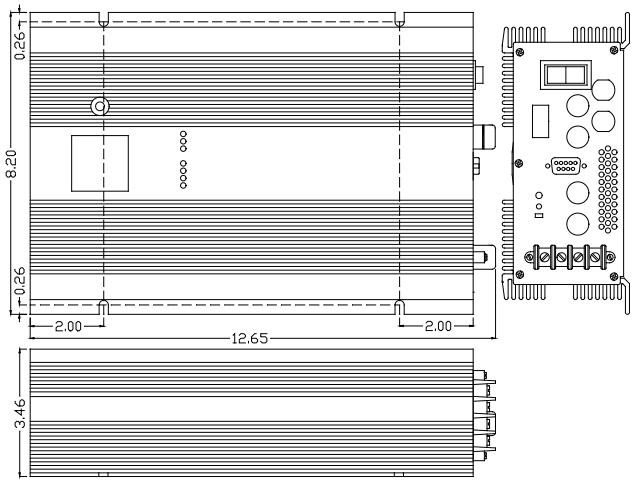
- Fully Isolated Design
- Adjustable output voltage for charging standard or deep cycle lead-acid, VRLA or Gel cell type battery
- Transient Voltage Suppressor
- Extremely rugged and well suited for marine and other demanding environments
- High tolerance for shock and vibration
- Ultra-quiet low EMI operation
- Can be left permanently connected
- Spark free connection
- User selectable 2 or 3 stage charging profile
- 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
- Dry contact output fail relay
- 3 year parts and labour warranty

BCD310 Series DC Battery Charger

Mechanical Diagram



Shown without Digital Meter



Shown with Digital Meter

Specification

Electrical (Input)

Nominal (ip)	110	250	300
Actual (Vdc)	100-140	230-280	280-360
Input Amps (max)	3.8	1.7	1.4
Input Fuse (MDA)	5	3	2
Noise on Input	< 25 mV		

Environmental Specification

Operating Temp. Range	-25° to 40°C @ maximum output Derate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide-temp. operation avail.)
Humidity	0 - 95°C Relative Humidity (non-condensing) with optional 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	48
Output Volts (DC)	13.6 ± 0.05	27.2 ± 0.05	54.4 ± 0.05
Absorption Voltage (Vdc)	14.4	28.8	57.6
Charging Amps	20	10	5
Absorption to Float	3.0 Amps	1.5 Amps	0.75 Amps
Output Adjustment	± 1.0		
Output Fuses (AGC)	25A	15A	10A
Battery Banks	1 or 2 (3 bank option available)		
Battery Size (Amp Hrs.)	80 -120	40 - 60	20 - 30
Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V	63.9 ± 2.0V
Output Ripple & Noise	< 25 mV		
Regulation (Line & Load)	< +/- 0.5%		
Temperature Comp.	-30 mV/°C	-60 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
Warranty	3 years
Safety	Built to meet cETLus Standards

Available From:

ANALYTIC SYSTEMS
INNOVATIVE POWER CONVERSION SOLUTIONS
ISO 9001:2008 Certified Quality System