ANALYTIC SYSTEMS
Power Conversion Solutions

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DC Battery Chargers
BCD305 Series DC 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 BCD305 battery charger provides up to 300 watts to charge a 12V or 24V battery system (1 or 2 banks) from a 12V source. Both the 12V source and the batteries under charge must share a common ground.

This all-new single board design incorporates state of the art switchmode technology for unmatched efficiency and ultra-quite 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 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 and output overvoltage crowbar.

Available options include a remote control and/or extra-wide temperature. We are confident that you will get many years of reliable service from this Battery charger.

Applications

- Marine & other rugged environments
- Mobile Offices (TV and Radio Vans)
- Automotive / RV / Military
- Electric Utilities and Substations
- Base Station Power (Radio & Telecommunications)
- Industrial Controls
- Field Work / Construction Sites
- Solar / Alternative Power Systems
- Emergency Backup Power (UPS)
- Charge any 24V Battery System

Features

- Adjustable output voltage for charging standard or deep cycle lead-acid, VRLA or Gel cell type battery
- Audible & visual indicators for constant current, low input voltage, low output voltage & over-temperature
- Extremely rugged and well suited for marine and other demanding environments
- High tolerance for shock and vibration
- Ultra-quiet low EMI operation
- Current limiting protection
- Short circuit protection

- Reverse input protection
- Output over-voltage crowbar
- Dry contact output fail relay
- Over-temperature shutdown
- Spark-free connection
- Wide-Temperature operation Available
- Conformal coating and/or harsh environment ruggedization available
- Optional portable features for automotive use
- 3 year parts and labour warranty

Mechanical Diagram

S 0.20" DIAMETER HOLE
T 0.20" DIAMETER HOLE FORMING KEYHOLE SLOT
V 0.40" DIAMETER HOLE
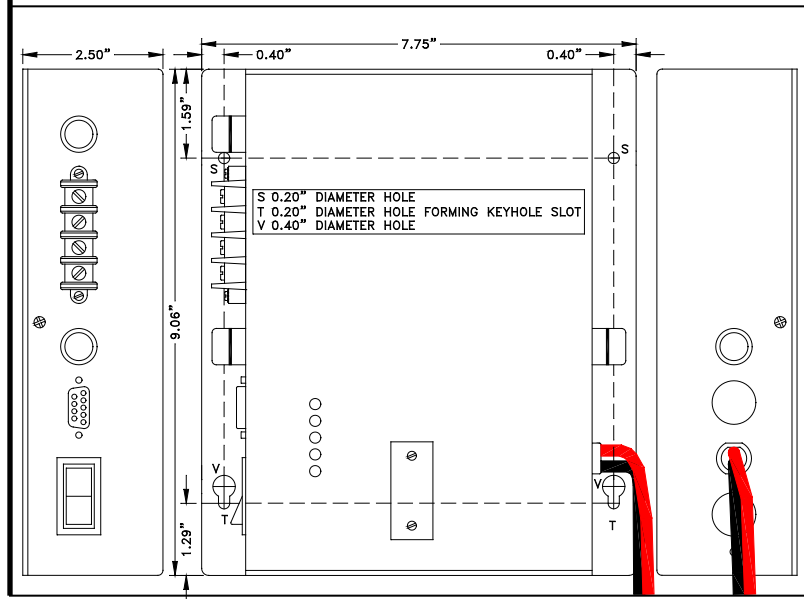
Specification

Electrical (Input)

Model Number	BCD305-12-12	BCD305-12-24
Input Volts (DC)	10.5 – 14	10.5 - 28
Input Amps (max)	30	
Input Fuse (AGC)	20A x 2	
Noise on Input	< 10 mV	
Low Input Voltage Alarm	10.5V	

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	Any Input or Output to Case 500 VDC Input to Output – Common Negative

Electrical (Output)

Output Nominal (op)	12	24
Output Volts (DC)	13.6 ± 0.05	27.2 ± 0.05
Charging Current (Amps)	♦ 26	♦ 13
Output Adjustment	± 0.5	
Output Crowbar	Programmed O/P Volts x (1.3 ±1%)	
Output Fuse (AGC)	30A x 2	
Output Ripple & Noise	< 10 mV	
Battery Banks	1 or 2	
Stages	2	
Battery Size (Amp Hours)*	104-156	52-78
Regulation (Line & Load)	< +/- 0.5%	
Duty Cycle	Continuous 100% for 24 hours per day	
Efficiency	> 85% @ Maximum Output	

Mechanical Specification

Length	9.1 in / 23.1 cm
Width	7.8 in / 19.8 cm
Height	2.5 in / 6.4 cm
Material	Marine Grade Aluminium
Finish	Black Anodize / Powder Epoxy Coat
Fastenings	All 18-8 Stainless Steel
Weight	4.0 lb / 1.8 kg
Connections	Four contact output terminals
Warranty	3 years
Safety	Built to meet UL458 & CSA22.2.107.1

♦ The Actual charging rate depends upon the input/output voltage ratio. To obtain the charging capability at any given input voltage, use the following formula:

Charging Current = Input Volts/Output Volts x 26
For example, at 11 VDC in and 13.6 VDC out, the charging current = 11/13.6 x 26 = 21.0 amps

Available From:

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