



## Benefits

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

## 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

# DC Battery Chargers

## BCD605 Series DC Battery Charger

## Description

The BCD605 battery charger provides up to 600 watts to charge a 12V or 24V battery system (1 bank) 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-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 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.

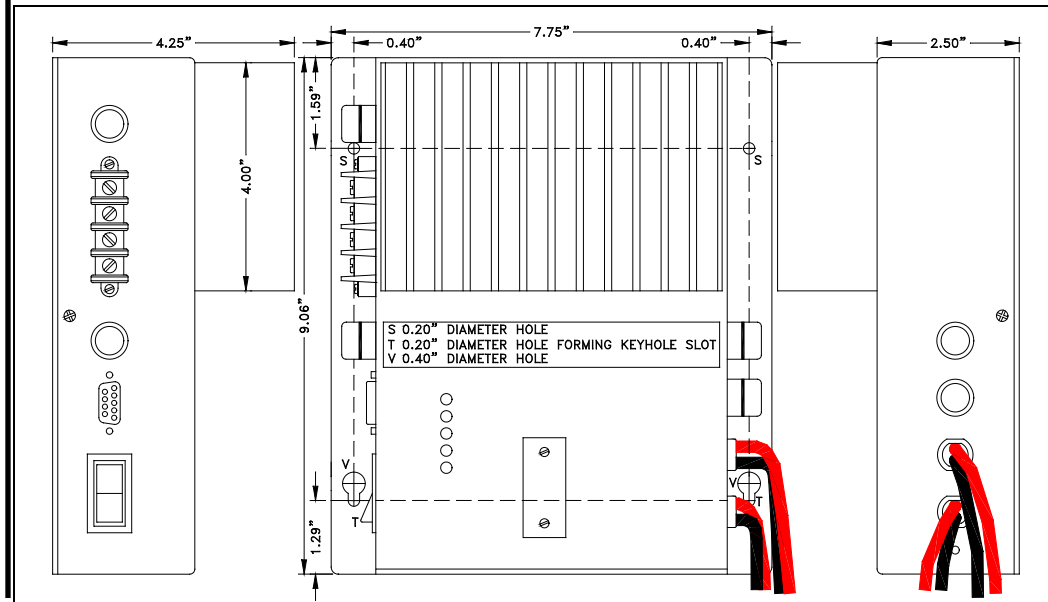
An optional remote control is also available. We are confident that you will get many years of reliable service from this Battery charger.

## 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

# BCD605 Series DC Battery Chargers

## Mechanical Diagram



## Specification

### Electrical (Input)

Model Number	BCD605-12-12	BCD605-12-24
Input Volts (DC)	10.5 – 14	10.5 – 28
Input Amps (max)	50	
Input Fuse (AGC)	30A x 2	
Noise on Input	< 50 mV	
Low Input Voltage Alarm	10.5 V	

### 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)	♦ 40	♦ 20
Output Adjustment	± 0.5	
Output Crowbar	16.0 ± 0.5V	32.0 ± 1.0V
Output Fuse (AGC)	25A x 2	
Output Ripple & Noise	< 50 mV	
Battery Banks	1	
Stages	2	
Battery Size (Amp Hours)	160-240	80-120
Regulation (Line & Load)	< +/- 0.5%	
Duty Cycle	Continuous 100% for 24 hours per day	
Efficiency	> 90% @ Maximum Output	

### Mechanical Specification

Length	9.1 in / 23.1 cm
Width	7.8 in / 19.8 cm
Height	4.3 in / 10.8 cm
Material	Marine Grade Aluminium
Finish	Black Anodize / Powder Epoxy Coat
Fastenings	All 18-8 Stainless Steel
Weight	6.0 lb / 2.7 kg
Connections	Four contact output terminals
Warranty	3 years

♦ 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:

$$\text{Charging Current} = \text{Input Volts} / \text{Output Volts} \times 40$$

For example, at 11 VDC in and 13.6 VDC out, the charging current =  $11.5 / 13.6 \times 40 = 33.8$  amps

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