

BCD315 Series Isolated DC Battery Charger



A product of:



Benefits

- Ultra-Quiet
- Convection cooled, no noisy fan
- Power sensitive electronics without interference
- Rugged & Reliable
- Ensure years of safe and trouble free operation
- Fast & Accurate Charging

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

Battery Chargers

BCD315 Series

Description

The BCD315 battery charger provides up to 300 watts to charge a 12 or 24 or 48 Volt battery system (1 or 2 banks) from a 24V or 48VDC source. The batteries must share a common ground but the source can be on a different positive or negative ground.

The all-new Current Mode switching design offers increased power and reliability in a compact package. The low ripple charging profile and standard equalize cycle greatly increases the lifetime of expensive battery systems.

Extra input and output filtering reduce EMI to extremely low levels. Reliability features include an input fuse, thermal shutdown, current limiting, reverse battery hookup protection and output short circuit shutdown with automatic recovery.

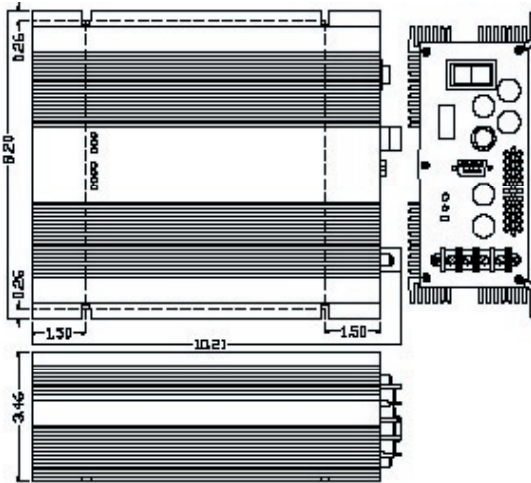
Optional features include a Digital Volt/Ammeter, 3-Bank Charging, a Remote Control Panel, and/or a second Battery Temperature Sensor.

We are confident that you will get many years of reliable service from this DC Battery Charger.

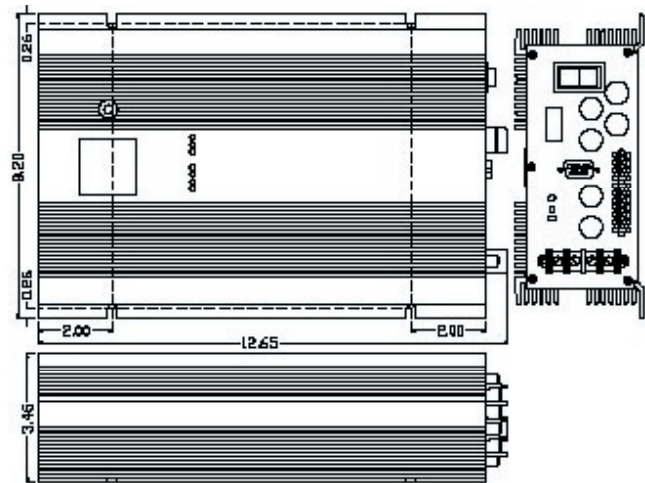
Features

- 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
- 2 years parts and labour warranty

Mechanical Diagram



Shown without Digital Meter



Shown with Digital Meter

Specifications (Specifications Subject to Change Without Notice)

Electrical (Input)

| | | |
|------------------|---------|-------|
| Nominal (ip) | 24 | 48 |
| Actual (Vdc) | 20-35 | 40-60 |
| Input Amps (max) | 20 | 9.6 |
| Input Fuse (MDA) | MDA25 | MDA15 |
| Noise on Input | < 25 mV | |

Environmental Specifications

| | |
|-----------------------|---|
| 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% 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 |

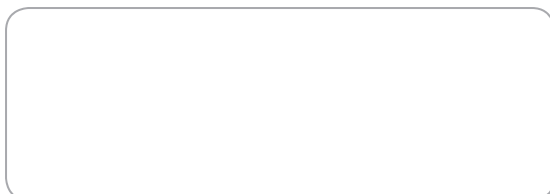
Electrical (Output)

| | | | |
|--------------------------|--------------------------------------|-------------|-------------|
| 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 | 1.0 Amps |
| Output Adjustment | ± 0.5 | | |
| Output Fuses (AGC) | 25 x 2 | 15 x 2 | 10 x 2 |
| 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 Specifications

| | |
|-------------|--------------------------------------|
| 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 | 2 years |
| Safety | Approval to cETLus Standards Pending |

Available from:



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The power conversion company

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