

MajorBCD610 Watt DC Charger

The **MajorBCD610** Battery Charger charges either 12, 24, 32 or 48 Volt batteries from a -48, 72, 110, 220 or 300 VDC power source. Other battery voltages up to 72 Volts are also available by special order.

The all new Current Mode switching design offers increased power and reliability in a compact package. Extra input and output filtering reduce EMI to extremely low levels.

The output voltage is easily adjusted 0.5 Volts above or below the standard output voltage to accommodate special charging requirements. 1 or 2 high quality analog meters can be added (factory option) to allow monitoring of charging current and charging voltage.



Product Features

- **Transient Voltage Suppressor**
- **Fully Isolated Design**
- **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**
 - ▶ Well suited for marine and other demanding environments
- **Short Circuit Shutdown**
- **User-Selectable 2 or 3 Stage Charging Profile**
- **High Tolerance**
 - ▶ For shock and vibration
- **Ultra-Quiet**
 - ▶ Low EMI operation
- **Protection**
 - ▶ Current limiting protection
 - ▶ Short circuit protection
 - ▶ Reverse input protection
 - ▶ Output over-voltage crowbar
 - ▶ Over temperature shutdown
- **Spark-Free Connection**
- **Can be left Permanently Connected**
- **Dry Contact Output Fail Relay**
- **Warranty**
 - ▶ 3 years parts and labour

Product Specifications

Mechanical & Environmental

| | |
|------------------------------------|---|
| Operating Temperature Range | 0 - 40°C @ Maximum Output; Derate Linearly 2.5% per °C from 40°C |
| Humidity | 0 - 95°C @ Relative Humidity (non-condensing) with optional conformal coating |
| Audible Noise | None Ødb @ 3 feet |
| Typical Service Life | >10 years (87,600 hours) |
| Isolation | Input-Case & Input-Output 1500 VDC; Output-Case 500 VDC |
| Dimensions (L x W x H) | 14.5 x 9.9 x 3.0 in / 36.8 x 25.1 x 7.6 cm |
| Clearance | 1 inch (2.5 cm) all around |
| Physical | Marine-grade aluminum material, Black anodize / powder epoxy coat finish; 18-8 stainless steel fastenings; 4 contact output terminals |
| Weight | 7.6 lbs / 3.3 kg |
| Warranty | 3 years |
| Safety | CSA/UL Pending |

Model Selection Guide

| MajorBCD | 610-48 | 610-72 | 610-100 | 610-250 | 610-300 |
|-------------------------|-----------|-----------|-----------|-----------|-----------|
| Nominal Input | 110 | 250 | 300 | 250 | 300 |
| Input Voltage | 100 - 140 | 230 - 280 | 280 - 360 | 230 - 280 | 280 - 360 |
| Input Amps | 3.4 | 1.5 | 1.3 | 1.5 | 1.3 |
| Input Fuse (MDA) | 4 | 3 | 2 | 3 | 2 |
| Noise on Input | < 25 mV | < 25 mV | < 25 mV | < 25 mV | < 25 mV |

| | | | | |
|----------------------------------|--|--|--|--|
| Nominal Output Voltage | 12 | 24 | 32 | 48 |
| Output Voltage | 13.6 ± 0.05 | 27.2 ± 0.05 | 36.3 ± 0.05 | 54.4 ± 0.05 |
| Absorption Voltage | 14.4 | 28.8 | 38.4 | 57.6 |
| Charging Amps | 40 | 20 | 15 | 10 |
| Absorption to Float | 4.0 Amps | 2.0 Amps | 1.5 Amps | 1.0 Amps |
| Output Fuses (ATC) | ATC 40 x 2 | ATC 30 x 2 | ATC 20 x 2 | ATC 15 x 2 |
| Battery Banks | 1 or 2 | 1 or 2 | 1 or 2 | 1 or 2 |
| Output Adjustment | ± 0.5 | ± 0.5 | ± 0.5 | ± 0.5 |
| Battery Size (AH) | 160 - 240 | 80 - 120 | 60 - 90 | 40 - 60 |
| Output Crowbar | 16.0 ± 0.5 V | 32.0 ± 1.0 V | 42.7 ± 1.3 V | 63.9 ± 2.0 V |
| Output Ripple & Noise | < 50 mV | < 50 mV | < 50 mV | < 50 mV |
| Transient Response | < 2 V for 50% Surge | < 2 V for 50% Surge | < 2 V for 50% Surge | < 2 V for 50% Surge |
| Line Load Regulation | < ± 0.5% | < ± 0.5% | < ± 0.5% | < ± 0.5% |
| Duty Cycle | Peak 20% for 10 min max; Continuous 100% for 24 hours/day | Peak 20% for 10 min max; Continuous 100% for 24 hours/day | Peak 20% for 10 min max; Continuous 100% for 24 hours/day | Peak 20% for 10 min max; Continuous 100% for 24 hours/day |
| Efficiency | > 75% @ Maximum Output | > 75% @ Maximum Output | > 75% @ Maximum Output | > 75% @ Maximum Output |
| Stages | 2 or 3 | 2 or 3 | 2 or 3 | 2 or 3 |