

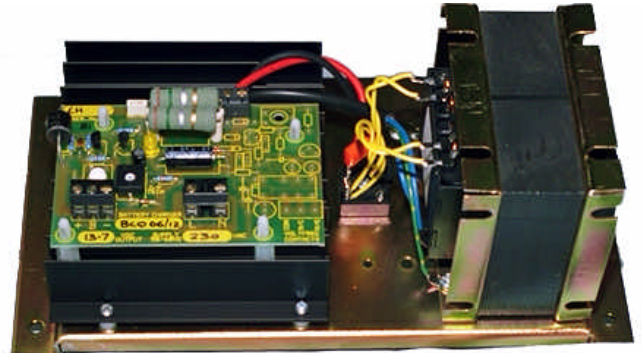


## BCQ (Series) Battery Chargers

Genset Controls - Timers - Monitors - Trips - Battery Charging - Spares & Accessories - Custom Products

The BCQ series are CURRENT LIMITED, CONSTANT POTENTIAL solid state battery chargers which allow maintenance free charging of Nicad & Lead-Acid batteries, over a wide ambient temperature range.

This format is available in 12V/3A & 6A and 24V/3A. For the 24V/6A & 8A versions please see Data & Application Note - DA97BCQ2. While these retain the same base plate and fixing centres : they are 130mm deep, slightly different construction and offer a higher specification. Please refer to our latest Catalogue for ordering information.



BCQ06 / 12 / 230

**OPERATION :** The electronic circuitry limits the charge current to 3 Amps maximum (DC average) at all times and will switch off completely should the battery terminal voltage fall below a pre-set value (7V on 12V/10 cell units and 15V on 24V/18 & 20 cell units) enabling the charger to be operated in parallel with the charging alternator. As the battery is charged it's internal resistance rises, "tapering" the charge current accordingly, until the battery terminal voltage approaches the charger reference voltage, whereupon the battery is trickle charged to the "constant potential" float level.

**VOLTAGE THRESHOLD :** Unless specified otherwise, all units are pre-set at : 2.3V/Cell 'Float' and 2.5V/Cell 'Boost' for **Lead Acid** Batteries or 1.3V/Cell 'Float' and 1.5V/Cell 'Boost' for **NICAD** Batteries. The potentiometer is calibrated at centre scale to provide approx. +/- 5% adjustment for temperature compensation

**BOOST MODE :** By linking the boost terminal (marked "B") to the battery -Ve, the float threshold is raised to a higher volts/cell level. Although this level is set at manufacture, the potentiometer described above will also trim this level, i.e. for lead acid the range is 2.5 to 2.7 volts/cell.

**CHARGE INHIBIT :** This prevents the charger from operating into a short circuit, reverse polarity or should the terminal voltage fall below half the "FLOAT VOLTAGE". See over leaf.

**LEAKAGE CURRENT :** 2mA

**CONSTRUCTION :** Mild steel (1mm) chassis, zinc plated and gold passivated, carrying:- frame transformer, black anodised aluminium heatsink (2 deg C/watt) , bridge rectifier and printed circuit board. The charger should be mounted so that the natural air-flow passes through the heat-sink.

**INDICATOR :** "POWER ON" LED. mounted on the printed circuit board.

**SUPPLY VOLTAGE :** 115 +/- 20% 50/60HZ  
230 +/- 20% 50/60HZ

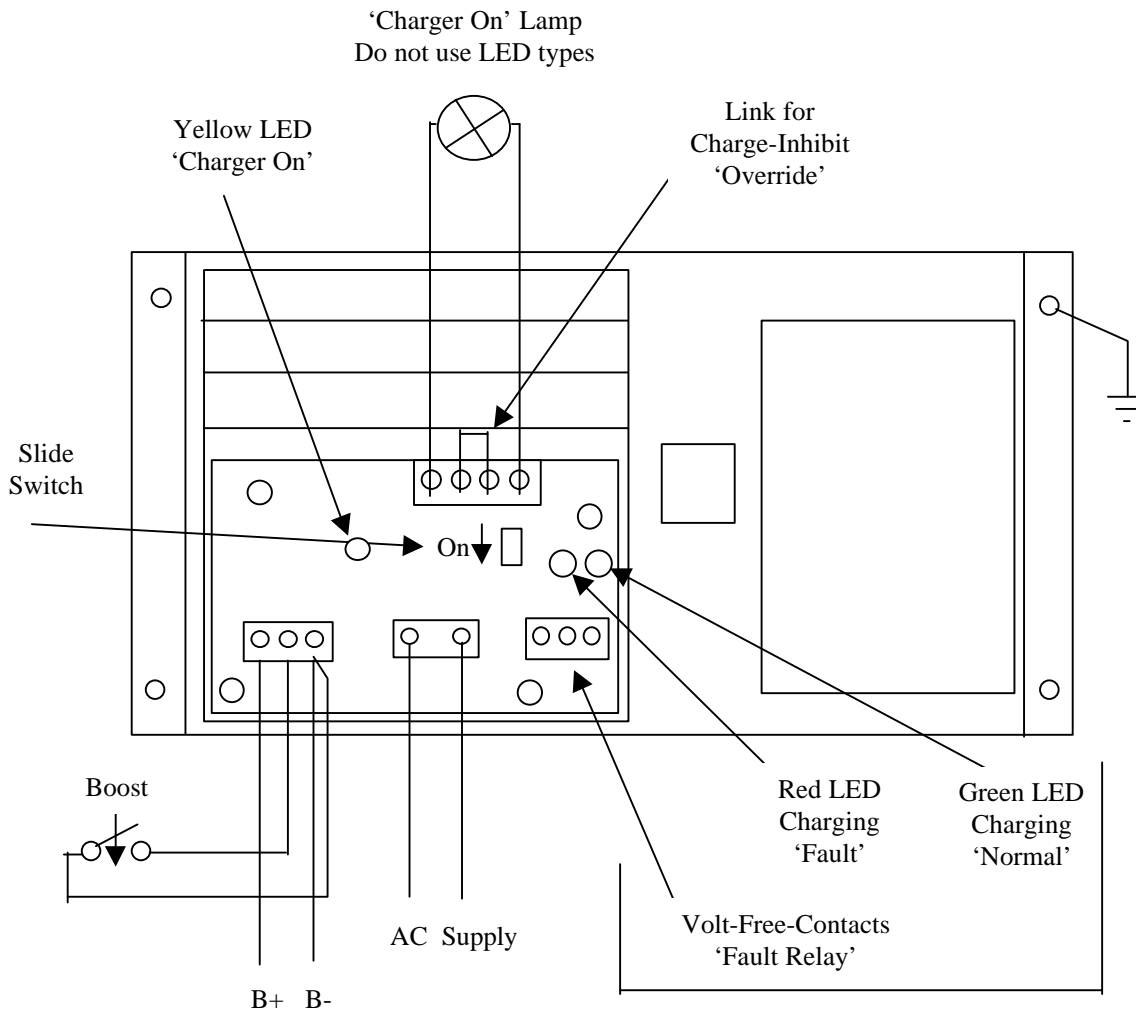
**TEMPERATURE RANGE :**  
-10 deg C to +55 deg C (operating)  
-20 deg C to +70 deg C (storage)

**DIMENSIONS :** (12Volt/3Amp)  
230 mm (H) x 130mm (W) x 80 mm (D)  
101 mm x 213 mm x M5 fixing centres

**DIMENSIONS :** (12Volt/6Amp & 24Volt/3Amp)  
230mm (H) x 130mm (W) x 90mm (D)  
101mm x 213mm x M5 fixing centres

**WEIGHT :**  
1.8 Kg (12volt/3amp)  
2.0 Kg (12volt/6amp & 24volt/3amp)

## CONNECTIONS



### Charge 'Fault' circuit

**Notes:**

1. Fit 'Override' link after commissioning or to charge batteries < ½ Float Level.
2. BCQ0 – F / -- / --- shown above. 'Charge Fault circuits' not fitted on standard charger.
3. Move slide switch to 'On' for Fault circuitry powered from Battery so that 'loss of AC supply' is not a fault condition.
4. Relay de-energised in the Fault condition.
5. Fault Condition = Low Battery (see: 1.), Open Circuit output & reverse polarity battery.



## CAPRICORN CONTROLS LIMITED

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