

NEW BCM 5A & 10A Battery Chargers

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

- 115V and 230VAC connectable
- SLA (Gel), LA & NICAD Batteries
- Fault Circuit & Alarm Relay
- Boost Mode

The BCM 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. They are available in 5A and 10A for both 12V and 24V systems. **Note:** These chargers are not suitable for supplying the load with the batteries removed.

OPERATION : The electronic circuitry limits the charge current to 5 (or 10) 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 system and 15V on 24V system) 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 1.4V/Cell 'Float' and 1.5V/Cell 'Boost' for **NICAD** Batteries. The potentiometer is calibrated at centre scale to provide approx. +/- 20% adjustment for temperature compensation



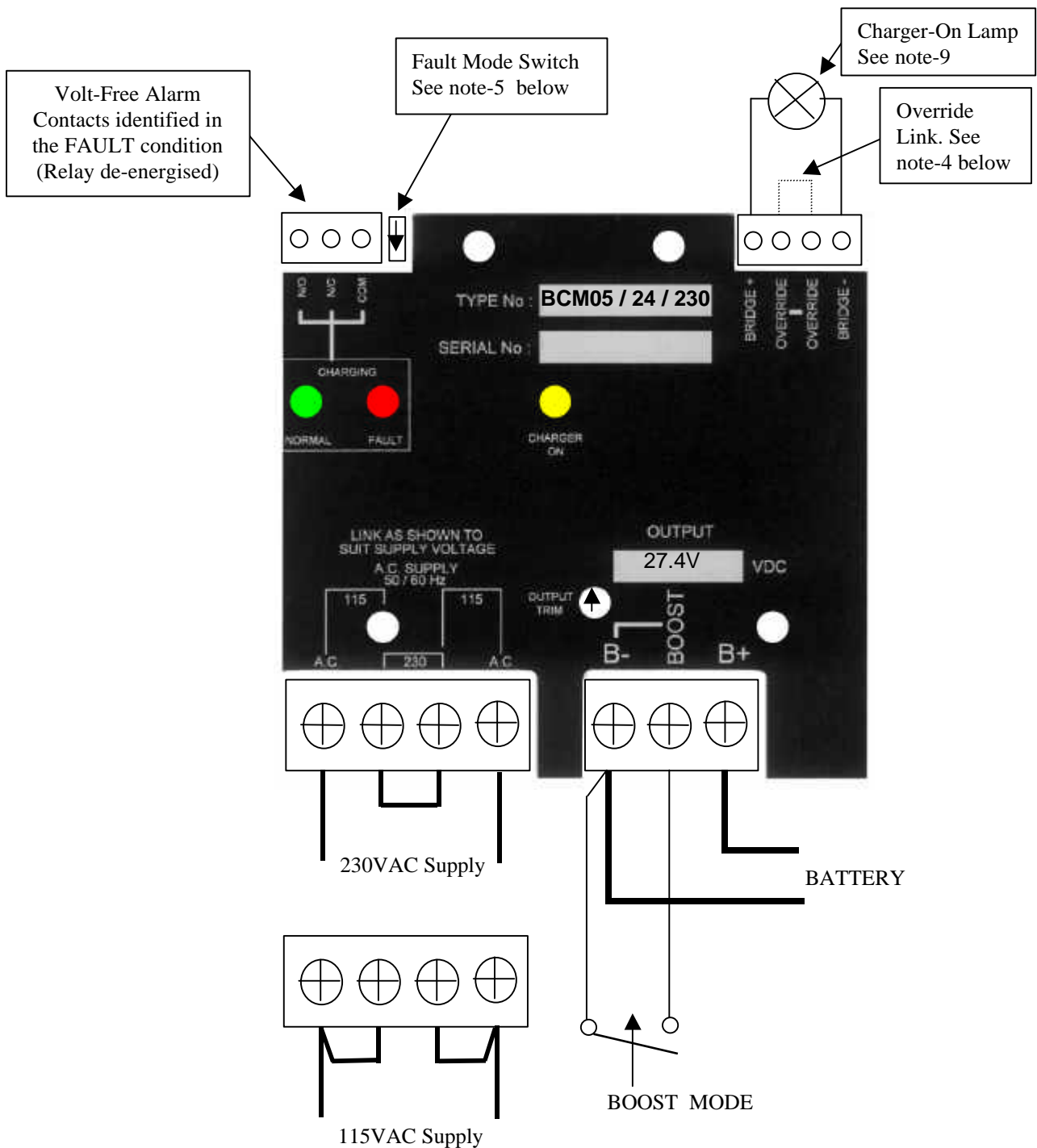
BOOST MODE : By linking the boost terminal to the battery -Ve, the float threshold is raised to a higher volts/cell level. This higher voltage causes the cells to gass, equalising the cell voltages. Although this level is set at manufacture, the potentiometer described above will also trim this level, i.e. for lead acid the range is ~ 2.5 to 2.7 volts/cell.

Boost link must only be fitted temporarily or the batteries will be permanently damaged.

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.

OVERRIDE TERMINALS : Temporarily link to override the Charge Inhibit protection in order to start charging a battery with a low terminal voltage (see above). Note: In this mode, the maximum output current on 24V chargers is reduced from 5A and 10A to approx. 3A and 6A respectively.

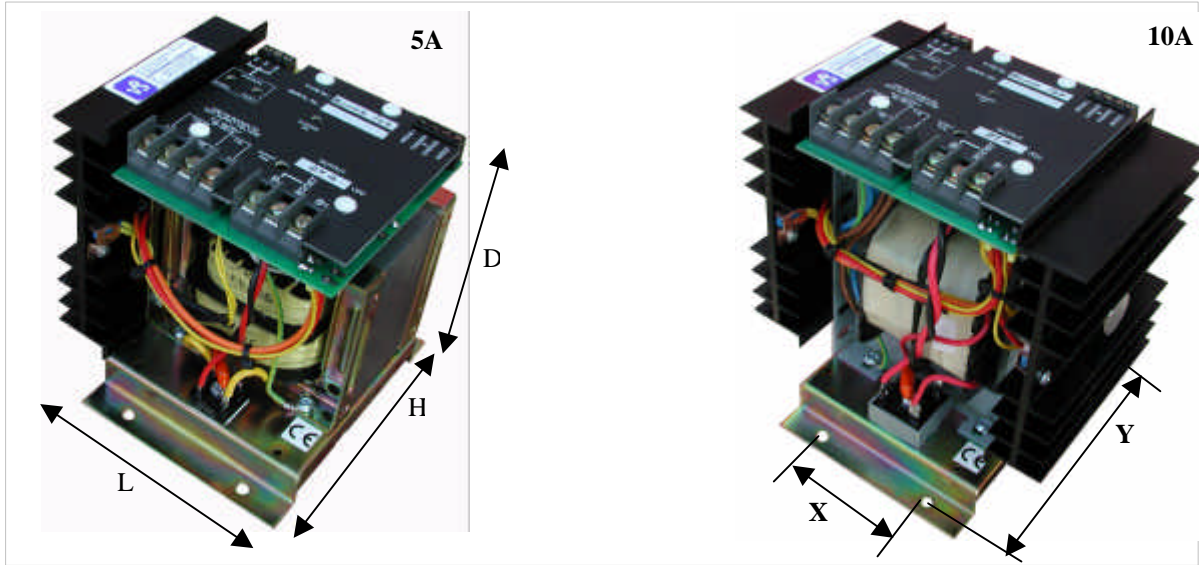
CONNECTIONS



Notes:

1. 'Charger ON' = Amber LED
2. 'Charging Normal' = Green LED
3. 'Charging Fault' = Red LED (note: Green & Red LEDs cannot be on together)
4. Only fit 'Override' link to commission batteries or to start charging if terminal voltage < ½ Float Level.
5. Set switch to 'On' for Fault circuitry powered from Battery if loss of AC supply not a fault condition.
6. Relay de-energised in the Fault condition.
7. Fault Condition = terminal voltage < ½ Float Level, Open Circuit output or Thermal Trip.
8. Typical Top Plate shown above but some models vary in layout
9. External 'Charger On' lamp must be an incandescent bulb, an LED must not be used.

Dimensions & Electrical Ratings



Dimensions and Weights :

Model Number	System Voltage	Current Limit	Dimensions L x H x D (mm)	Fixing Centres X x Y x dia (mm)	Nett Weight (Kg)
BCM05 / -- / 230	12	5A	100 x 130 x 140	60 x 115 x M5	2.0
BCM05 / -- / 230	24	5A	126 x 130 x 140	60 x 115 x M5	3.2
BCM10 / -- / 230	12	10A	154 x 130 x 140	60 x 115 x M5	3.2
BCM10 / -- / 230	24	10A	154 x 130 x 170	60 x 115 x M5	4.7

Fuse Ratings :

Model Number	System Voltage	Current Limit	Transformer (VA)	Supply Fuse gTr or 'T' rating	Output Fuse gG or HRC rating
BCM05 / -- / 115	12	5A	90	2A	6A
BCM05 / -- / 230	12	5A	90	1A	6A
BCM10 / -- / 115	12	10A	150	3A	12A
BCM10 / -- / 230	12	10A	150	2A	12A
BCM05 / -- / 115	24	5A	150	3A	6A
BCM05 / -- / 230	24	5A	150	2A	6A
BCM10 / -- / 115	24	10A	300	6A	12A
BCM10 / -- / 230	24	10A	300	3A	12A

Note:

- 1/ The supply fuse must be placed close to the source
- 2/ We recommend that an output fuse is always fitted

SPECIFICATION

Ordering Information – unless specified otherwise

Model Number	System Voltage	Battery Type	Number of Cells	Float Voltage	Boost Voltage
BCM -- / 12 / 230	12V	Lead Acid	6	13.7	15.0
BCM -- / 24 / 230	24V	Lead Acid	12	27.4	30.0
BCM -- / 12 / 230	12V	L.A. (Gell)	6	13.7	---
BCM -- / 24 / 230	24V	L.A. (Gell)	12	27.4	---
BCM -- / 09C / 230	12V	Nicad	9	12.6	13.5
BCM -- / 10C / 230	12V	Nicad	10	14.0	15.0
BCM -- / 18C / 230	24V	Nicad	18	25.2	27.0
BCM -- / 20C / 230	24V	Nicad	20	28.0	30.0

BCM05 / ---- / 230 Current limited to 5A output

BCM10 / ---- / 230 Current limited to 10A output

The above 'Float' and 'Boost' levels are only a guide. Where possible, always refer the the battery manufacturers own information.

Note: Boost Mode should not be used with Sealed Lead-Acid Batteries

Supply : reconfigurable for 115V or 230V 50 / 60Hz

115V nominal = 100 – 130V

230V nominal = 210 – 250V

Note: For other voltages, please contact the Sales Desk for price and availability.

Output Trim : + / - 20% adjustment to compensate for climatic changes

Leakage Current : from battery into charger approx. 2 mA

Ambient Temperature :

Operating : -10⁰C to +55⁰C

Storage : -25⁰C to +70⁰C

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



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