



the BCM2450 BATTERY CHARGER

The battery charging characteristic comprises three stages as follows:

- 1. BULK CHARGE (RED LED on)
The charger delivers a closely controlled current to the battery. During this phase, about 75% of capacity is restored.
- 2. EQUALISATION PHASE (AMBER LED on)
The charger slowly reduces the current to maintain the battery at the 'boost' voltage. This brings the battery to about 98% charge without excessive gassing.
- 3. FLOATING (GREEN LED on)
The battery voltage is allowed to drop to the 'float' voltage. The current from the charger is automatically adjusted to supply any loads connected to the battery and maintain the battery in the fully charged state.

This 3-stage charging system re-charges the battery both quickly and safely. The charging cycle starts automatically on application of the mains supply.

INSTALLATION

The charger must be firmly secured to a vertical surface in a ventilated compartment away from extremes of temperature and close to the batteries. The BCM2450 charger is fan cooled and there must be at least 10cm. clearance in front of the unit. The front ventilation grilles must not be obstructed to avoid over-heating.

The battery must be connected to the charger BEFORE any connection is made to the AC mains supply. The battery to charger connections must be made with cable of appropriate cross-sectional area – we would recommend at least 10 square mm. Two positive studs (+) and one negative stud (-) are provided. The battery voltage is sensed on the "+M" terminal, therefore if only one battery is connected to the charger then its positive connection should be made to "+M" and the "+2" ignored. The cables should be secured with cable clips to prevent movement and possible chafing. The voltage drop in the charger-to-battery cables can be partially compensated for by connecting a cable (0.5 sq. mm) from the "+S" terminal to the battery positive terminal. If no cable is connected to "+S", then sensing is automatically performed at the output terminals of the charger. An optional remote battery temperature sensor may be connected across the two "temp" terminals. This will then automatically adjust the charger output voltage for optimum charging at all temperatures.

The AC input connection to the charger should be made via a circuit breaker of 15 amp rating on the main control panel. The earth wire MUST be connected to the system safety earth.

IMPORTANT

The installation of this battery charger is straightforward, but it must be remembered that the AC mains input voltage is dangerous and that lead-acid batteries store large amounts of energy, which could cause a fire hazard if short-circuited. If you are in any doubt at all, have the charger installed by a competent electrician.

This equipment is designated professional equipment with a rated power of >1kw.

SPECIFICATION

INPUT VOLTAGE RANGE
180V to 270V AC 47 to 63Hz

EFFICIENCY
over 80% at 230V input

OUTPUT VOLTAGE & CURRENT
 BCM2450
 float voltage 27.6V
 boost voltage 28.8V
 output current 50A

SIZE
220wide x 350high x 65deep mm

MAXIMUM AMBIENT TEMPERATURE
fully rated from -10C to +45C

PROTECTION
extensive protection facilities are built into the BCM chargers for optimum reliability. These include protection against short-circuit, output over-voltage and excessive temperature.

OPTIONS
PTS1 temperature sensor measures the battery temperature and adjusts the charger output voltage accordingly for safe charging at elevated ambient temperatures.

The BCM range of battery chargers are designed and manufactured in the
U.K.