

**BC700/701 series**

**AUTOMATIC BATTERY CHARGERS  
3 AMP CONSTANT CURRENT**

The Modex range of 3 Amp constant current chargers provide for the fully automatic monitoring and charging of standby diesel generator battery packs.

The advantages of this type of charger are primarily:-

- **Rapid recovery of battery charge**, equivalent to a considerably higher rating 'taper' type charger.
- **Protection from overcharging**. The unit switches off automatically once the batteries are fully charged.
- **Prolonged battery life**, from the reduction of gassing and continual exercising of the cells.

When connected, the charger measures the battery terminal voltage. If this is below a pre-calibrated threshold, the unit outputs a series of charge pulses to the battery, regulating the average current to a constant 3 Amps.

Between charge pulses, the BC700 continues to monitor the battery terminal voltage. When the measured voltage has climbed to a suitable threshold the charger turns off, allowing the battery to decay back to the lower voltage threshold before the cycle is repeated. The 'switch off' and 'switch on' voltage thresholds are factory calibrated according to the type of battery used:-

| Calibration:      | BC700 (12 V) |                 | BC701 (24 V)     |           |                  |                  |
|-------------------|--------------|-----------------|------------------|-----------|------------------|------------------|
|                   | Lead Acid    | Ni-Cd<br>9 cell | Ni-Cd<br>10 cell | Lead Acid | Ni-Cd<br>18 cell | Ni-Cd<br>20 cell |
| Normal operation: |              |                 |                  |           |                  |                  |
| Switch on, VDC    | 12.6         | 12.3            | 13.8             | 25.4      | 24.7             | 27.6             |
| Switch off, VDC   | 13.7         | 13.2            | 14.8             | 27.4      | 26.6             | 29.5             |
| Boost operation:  |              |                 |                  |           |                  |                  |
| Switch on, VDC    | 14.9         | 13.6            | 15.0             | 29.5      | 27.2             | 29.9             |
| Switch off, VDC   | 15.7         | 14.5            | 15.9             | 31.5      | 28.9             | 31.9             |

The rate of the charge/decay cycle depends on the capacity and condition of the battery and the static load across it (the charger itself presents negligible load).

The 'boost' mode of operation may be selected by linking two terminals, either through a remote panel switch, relay or timer. This increases the switch on and switch off voltage thresholds, and may be used for short periods to increase the battery charge level.

The charge cycle state is indicated by two LEDs: amber for 'on charge' and green for 'charge complete'. Two -ve DC (open collector transistor) outputs are provided for the remote signalling of 'on charge' and 'charger fail' conditions.

The BC700 series uses an open-chassis, metal cased design, suitable for bolt or stud mounting in an enclosed panel. Electrical connection is by 1/4" blade terminals on the main PCB.

**When ordering, please specify:-**

- Product type: BC700 (12V) or BC701 (24V)
- Battery type: lead acid, or number of Ni-Cd cells, or special calibration requirements

**Accessories:-**

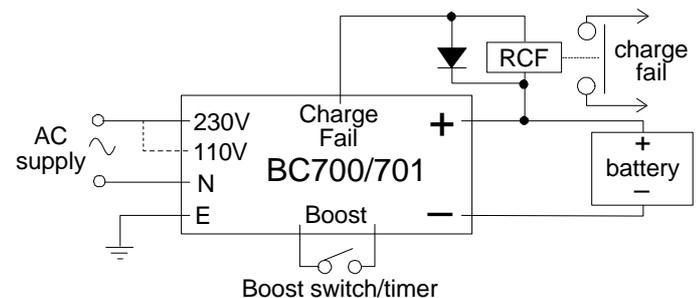
- CVT502/506** Battery voltage trips, DIN rail mounted
- CVT102/106** Battery voltage trips, 11 pin plug-in



**Product Specifications**

| Power supply:              | BC700  | BC701            |
|----------------------------|--|------------------|
| Nominal voltages           | 110 or 230 V AC (pin selectable)                             |                  |
| Voltage ranges             | 95 - 135 V AC or 190 - 270 V AC                              |                  |
| Frequency range            | 45 - 65 Hz.  |                  |
| Power consumption          | < 80 VA  | < 160 VA         |
| <b>DC charge output:</b>   | 3 Amps   |                  |
| Charge current             | 3 Amps   |                  |
| Switch off threshold range | 13.0 - 15.9 V DC   | 26.1 - 31.9 V DC |
| Switch on/off hysteresis   | approx. 1 V DC   | approx. 2 V DC   |
| <b>Charge fail output:</b> |  |                  |
| Type/rating                | - ve DC (open collector transistor)<br>max. 150 mA @ 33 V DC |                  |
| <b>General:</b>            |  |                  |
| Weight                     | approx. 1.75 kg  | approx. 2.55 kg  |
| Ambient temperature range  | -10 to +55 °C  |                  |
| EMC emission/immunity      | to EN50081-2/EN50082-2                                       |                  |

**Connection**



**Dimensions (mm)**

