

# BC700 series Constant Current Battery Chargers



- **Fully automatic charging**
- **Constant 3 Amp output: rapid charge recovery**
- **Normal/Boost operation**
- **110/230 VAC power supply**
- **Charge fail output**

## Description

Our range of 3 Amp constant current chargers provides 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 the 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 and switches off once the measured voltage has climbed to a preset threshold.

The charger then allows the battery to decay back to a lower 'switch on' voltage before the cycle is repeated.

The chargers are factory calibrated for use with wet lead acid or Ni-Cd battery types: see overleaf for available calibrations. 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).

A 'boost' mode of operation may be selected by the linking of two terminals, e.g. using a 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.

## Specification

Power supply:	BC700	BC701
operating voltages	pin selectable: 110 V AC (95 - 135 VAC) or 230 V AC (190 - 270 VAC)	
operating frequency	45 - 65 Hz.	
power consumption	< 80 VA	< 160 VA
<b>DC charge output:</b>		
nominal charge current	3 Amps	
switch off threshold	13.0 - 15.9 VDC	26.1 - 31.9 VDC
switch on/off hysteresis	approx. 1 VDC	approx. 2 VDC
<b>Charge fail, on charge output:</b>		
type/rating	negative DC (semiconductor) max. 150 mA @ 33 V DC	
<b>General:</b>		
weight (approx.)	1.75 kg	2.55 kg
operating temperature	-10 to +55°C	
dimensions	see overleaf	

All chargers are fitted with a dual wound toroidal transformer, allowing operation with 110VAC or 230VAC power supplies. Outputs are also provided for remote signalling of 'on charge' and 'charge fail' conditions.

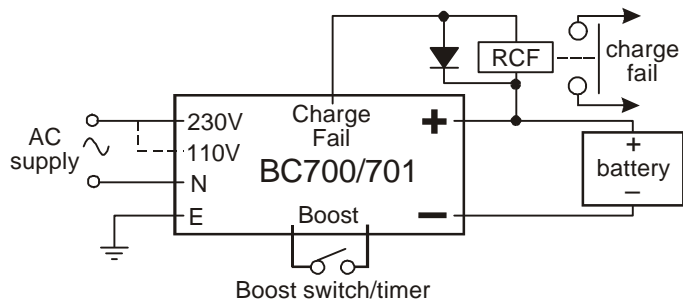
## Application

The BC700 series is designed for charging large battery packs (50+ Ah) in standby engine/generator applications. The chargers should NOT be used with smaller batteries or sealed (recombination type) lead acid cells.

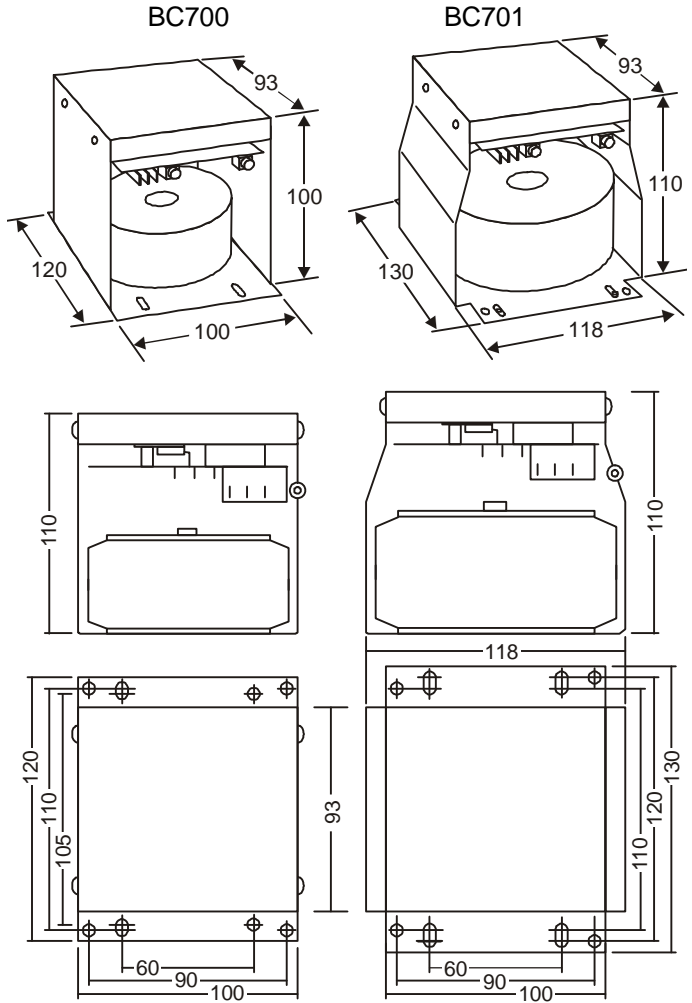
## Warranty

A two year limited warranty on materials and workmanship is given with this Murphy product. Details are available on request and are packed with each unit.

## Electrical Connection



## Dimensions



## Calibration

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

## How to Order

Stock number	Model	Description
41.70.0001	BC700/12LA	12V output, lead acid
41.70.0018	BC700/12NC10	12V output, 10 cell NiCd
41.70.0002	BC701/24LA	24V output, lead acid
41.70.0020	BC701/24NC18	24V output, 18 cell NiCd
41.70.0013	BC701/24NC20	24V output, 20 cell NiCd

## Related products:-

Stock number	Description
41.70.0007	CVT502 DC voltage trip relay, 18 – 32 V
41.70.0040	CVT506 DC voltage trip relay, 9 – 16 V



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In order to consistently bring you the highest quality, full featured products, we reserve the right to change our specifications and designs at any time.