

# 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.

All chargers are fitted with a dual wound toroidal transformer, allowing operation with 110VAC or 230VAC

## Specification

power supply:	BC700 (12V)	BC701 (24V)
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	

power supplies. Outputs are also provided for remote signalling of 'on charge' and 'charge fail' conditions.

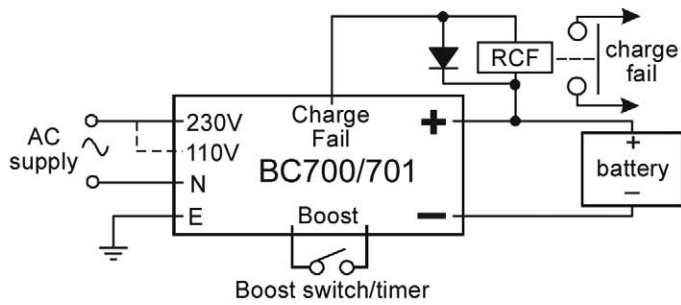
## Application

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. Full details are available on request or at [www.fwmurphy.co.uk/warranty](http://www.fwmurphy.co.uk/warranty).

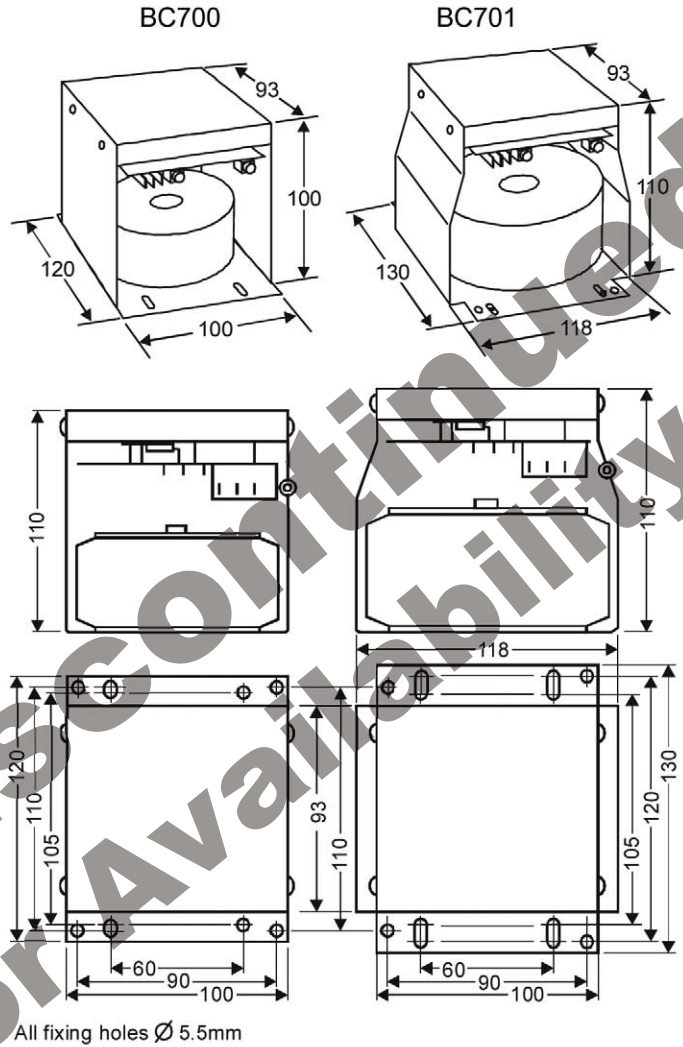
## Electrical connection



## 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

## Dimensions



## 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



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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.