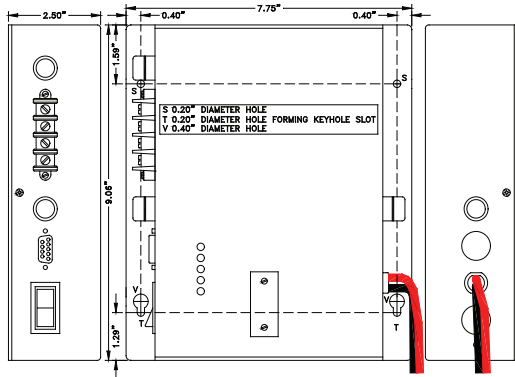


# ANALYTIC SYSTEMS

Power Conversion Solutions

## DC BATTERY EQUALIZERS

### MODEL BCD301 SERIES



### Description

The BCD301-24-12 is a Battery Equalizer that safely permits 12 Volts to be drawn of a 24V Battery bank. The unit is connected across the 24V battery bank, and its output is connected to the 12V midpoint of the battery bank. 12 Volt loads may now be connected to the lower battery, and providing the average load is less than the output capacity of the Battery Equalizer, both batteries will be maintained at the correct voltage. The BCD301-24-12 has a capacity of 25 amps. Units can be connected in parallel for even greater capacity.

The way that these units work is that the output is set to exactly  $\frac{1}{2}$  of the input voltage. Then as the load on the lower battery is applied, the unit takes current from the upper battery and feeds it to the lower battery to keep each at exactly  $\frac{1}{2}$  of the total voltage. The units are compatible with all 24V battery chargers and alternators.

Available options include a remote control and/or extra-wide temperature. We are confident that you will get many years of reliable service from this Battery Equalizer.

### Benefits

- Ultra-Quiet
- Power sensitive electronics without interference
- Rugged & Reliable
- Ensure years of safe and trouble free operation

### Design Features

- Maintains voltage across both 12V batteries in a 24 volt bank and permits 12V loads to be applied to the lower battery.
- Audible & visual indicators for overload, low input voltage, low output voltage & over- temperature
- Ultra-quiet low EMI operation
- Reverse input protection
- Current limiting
- Short circuit protection
- Output overvoltage crowbar
- Over-temperature shutdown
- Can be left permanently connected
- Dry contact output fail relay
- Remote control option
- Spark-free connection
- Wide-Temperature operation Available
- Conformal coating and/or harsh environment ruggedization available
- 3 year parts and labour warranty

### Applications

- Marine
- Heavy Equipment
- Trucking
- RV
- Military
- Equalize any 24V Battery System

An ISO9001 and AS9100 Registered Company Battery Chargers • Inverters • Power Supplies • Voltage Converters

8128 River Way, Delta B.C. V4G 1K5 Canada T. 604.946.9981 F. 604.946.9983 TF. 800.668.3884 (US/CANADA)

[www.analyticsystems.com](http://www.analyticsystems.com)

# DC BATTERY EQUALIZERS

# MODEL BCD301 SERIES

## Electrical (Input)

Model Number	BCD301-24-12
Input Volts (DC)	20-30
Input Amps (max)	15
Input Fuse (AGC)	25A
Noise on Input	< 10 mV
Low Input Voltage Alarm	21.0V

## Electrical (Output)

Output Nominal (op)	12
Output Volts (DC)	Input Volts / $2 \pm 0.05$ V
Charging Amps	25
Output Crowbar	$16.0 \pm 0.5$ V
Output Fuse (AGC)	30A x 2
Output Ripple & Noise	< 10 mV
Battery Banks	1
Stages	2
Regulation (Line & Load)	< +/- 0.5%
Duty Cycle	Continuous 100% for 24 hours per day
Efficiency	> 85% @ Maximum Output

## Environment Specification

Operating Temp. Range	-25° to +40°C @ maximum output Derate Linearly 2.5% per °C from 40°C (Optional -40°C extra wide temp. operation avail.)
Humidity	0 - 95% Relative Humidity (non-condensing) with optional conformal coating
Audible Noise	NONE 0db @ 3 ft
Typical Service Life	> 10 yrs. (87,600 hrs)
Isolation	Any Input or Output to Case 500 VDC Input to Output – Common Negative

## Mechanical Specification

Length	9.1 in / 23.1 cm
Width	7.8 in / 19.8 cm
Height	2.5 in / 6.4 cm
Material	Marine Grade Aluminium
Finish	Black Anodize / Powder Epoxy Coat
Fastenings	All 18-8 Stainless Steel
Weight	4.0 lb / 1.8 kg
Connections	#12 AWG Input Wires (Positive & Negative) Four contact output terminal
Warranty	3 years
Safety	Designed to meet CSA 22.2.107.1 & UL458

Note: Specifications are subject to change without notice.



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