



PowerWizard Software

Design Features

- State of the art Digital Signal Processor
- LLC resonant converter technology
- Synchronous Rectification
- Worldwide Universal AC Input with PFC
- Advanced Charging Algorithms
- Programmable from front panel
- Includes 'PowerWizard' software for advanced programming through standard USB port
- Military-Grade extrusion ensures a high tolerance for shock and vibration
- High Efficiency
- Ultra-quiet low EMI operation
- Optional Custom Battery Voltages
- User selectable 2 or 3 stage charging profile
- User selectable Float or Rest 'End of Charge'
- Temperature compensated charging
- Battery Over-temperature shutdown & recovery
- Charger Over-temperature shutdown& recovery
- Audible & visual indicators for operation and errors
- Output short circuit protection
- Output over-voltage protection
- Inrush Current Limiting
- Worldwide AC Input
- Five year warranty



Benefits

- Improved battery life
- More complete battery charging for improved battery runtime
- No interference with radios or other sensitive electronics
- Ultra Quiet Operation (no fans)
- Simple Operation
- Can operate as a Power Supply
- Rugged & Reliable
- Most efficient use of available AC power

Description

The BCM21 Intelligent Motorsports Battery Charger delivers a full 20 amps of charging power to a 12 volt battery in a race car or other vehicle. The charger comes standard with a 50 Amp Anderson SB-50 plug-in connector for direct connection to a race car and a matching cable with solid copper alligator clips for easy connection to other batteries.

The charger is preprogrammed for three standard types of Lead Acid batteries; Flooded (traditional Lead Acid), AGM (Absorbed Glass Mat Lead Acid) and Gel or VRLA (Valve Regulated Lead Acid). It has a 4th profile that is preset for a typical Lithium Ion battery. Any of the 4 charging profiles can be adjusted and renamed to suit a particular make and model of battery using the 'PowerWizard' software that is free to download from www.raceenergyperformance.com.

This charger uses advanced Power Factor Correction circuitry on the AC input so it will work from any standard AC voltage anywhere in the world. LLC Resonant Converter Technology allows Zero Voltage/Zero Current switching on the Primary or high voltage side of the main power transformer, and Active Rectification on the Secondary or Low Voltage side offers maximum efficiency and lowest Electromagnetic Interference (EMI) to ensure that the BCM21 does not disturb sensitive voice or data RF communication equipment.

Eight dual color LEDs and audible alert clearly indicate charging levels and stages as well as indicating faults with either the charger or the batteries. The 'PowerWizard' software that is free to download adds advanced charging algorithm programming and charger monitoring as well as a graphing function through the built in USB port.

The charger has a folding carrying handle and rubber feet so it can be used almost anywhere. It should not be exposed directly to rain, but damp ground like might be experienced under an awning will not be a problem.

Safety features include charger and battery over temperature shutdown, current limiting, short circuit protection, input under voltage shutdown and output over-voltage protection, all with automatic recover.

We are so confident that you will get years of reliable service from this Intelligent Battery Charger that we have backed it with a 5 Year Warranty!

MOTORSPORTS SOLUTIONS

INTELLIGENT BATTERY CHARGER

MODEL BCM21-12

Input	
Volts	85 - 265VAC, 1 Phase, 45 - 65 Hz
Current (max) *	4 Amps w/ Inrush Protection
Input Fuse	AGC 5 Amp
Power Factor	>0.99 at Full Load
Efficiency	>90% at Full Load
*	Maximum Input Current Specified at 85 VAC

Output	
Nominal Voltage	12 VDC
Voltage Range **	12.0 - 15.5 VDC
Output Current	20 Amps
Recommended Battery Amp-Hours	Up to 100
Standard Temperature Compensation	-24m V/C
Charging Stages	2 or 3 stage user selectable
End of Charge	Float or Rest user selectable
**	Actual Output Voltage determined by User Settings or by Charger Firmware

Mechanical	
Dimensions	9.5"/24.1cm Long x 8.0"/20.3cm Wide x 3.25"/8.3cm High
Clearance	1.0"/2.5cm all around
Weight	6.2 lb / 2.8 kg
Material and Finish	Clear Anodized Aluminum with 18-8 Stainless Fasteners
Mounting	Floor mount on rubber feet
Connections	Anderson SB-50 Plug plus matching cable c/w solid copper alligator clips

Environmental and Safety	
Operating Temperature Range	-25 to +40 C
Storage Temperature Range	-55 to +85 C
Humidity	0 - 95% Relative Humidity (non-condensing)
Vibration	Built to meet MIL810g
Emissions	Built to meet MIL461f
Isolation	> 1500 VDC Input-Output, Input-Case, Output-Case
Audible Noise	None
Duty Cycle	Continuous
Warranty	Five Years Parts and Labor
Safety	Built to meet CE, UL458 and CSA 22.2.107.1

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