

SMART BATTERY CHARGER

SBC-8188, 8288

Introduction

A high power smart charger designed for fast & safe charging of Lead Acid and LiFePO4 batteries with optional WiFi connectivity for remote monitoring of charging status of battery. The advanced Micro-processor control allow specific charging profile for Lead, AGM and LiFePO4 battery from 16AH to 200AH.

Features

- There is a WiFi version of same charger to allow for remote monitoring of charging status of battery on smart phones.
- Microprocessor Control with different charging & maintenance profiles for Lead Acid based & LiFePO4 battery.
- One button selection of battery types then set and forget operation.
- Microprocessor constantly monitors the battery status to deliver the right amount of charge without overcharge or drying out the electrolyte.
- Thermal control regulates charging current in hot or enclosed condition.
- Charger can be connected for long period of time to battery without overcharging.
- Special charging profile for LiFePO4 battery: soft-bulk, bulk then free float stage. No auto-repair.
- Lead Acid based battery:
 - Cold & normal temperature charge selection for LEAD & AGM battery
 - Initial qualifying checks, auto-repair, soft-bulk, bulk, pulse absorption, free float stages.
 - Suitable for car & deep cycle type battery from 16Ah to 180Ah.
 - Maximum 8 hour pulsing repair charging for sulphated and deeply depleted lead acid based battery.
- Supplied with 2 exchangeable leads with clamps & eyelet terminals.

Safety

- Spark free - charger only starts charging when it is connected to a suitable battery so no spark during first contact with battery terminal.
- Reverse Polarity & Short Circuit Protection with warning LED, charger returns to normal when fault is cleared.
- Over Voltage Protection- Charger will shut down when output senses higher than 16.5V & charger recovers when fault disappears.
- Maximum repair charge period is 8 hours and charger will indicate battery is defective.
- Auto shut down when Bulk & Absorption charge is over 40 hours to avoid waste of energy on defective battery.
- Convection cooled with thermal regulation to lower the charging current till unit's temperature drops. In the event of persistent rising temperature, charger will shut down its output with warning led.

Operation

The Smart Charger runs its own self-tests when connected to an suitable AC source. There are 5 charging modes to select: LEAD/ LEAD COLD/ AGM/ AGM COLD/ Lithium FePO4. The Cold Charge has a higher voltage applicable for LEAD & AGM battery in cold weather.

Lead Acid based battery:

Checks faulty & slightly sulphated Lead Acid based battery.

The Smart Charger will scan the battery by injecting short DC pulses. If the battery is found to be faulty, the warning led flickers until the faulty battery is removed.

Repair Charging

When the battery is found to be sulphated, the Smart Charger will automatically use the special repair charge pulses to de-sulphate the battery until battery becomes ready for normal bulk charge, the maximum repair charge is 8 hours and repair led flashes until battery is removed.

3 Stage Charging

When the battery is found to be chargeable, the battery will go through constant current Bulk charge of 7 Amp or at 4 Amp if battery voltage is lower than 11.8V until battery voltage rises to 12.5V, then switches to Bulk Charge. The Pulse Width Absorption Charge kicks in at end of Bulk Charge stage and finally a free Float Charge which monitors the battery voltage. When battery voltage is lower than 12.5V, a limited float charge current will top up the battery. This way the charger can be connected to the battery for a long period of time without over charge.

LiFePO4 battery:

There is a specific charging profile design for LiFePO4 with threshold voltage at 14.4V. There is no Repair, Cold Bulk, & Absorption charging stage.

SMART BATTERY CHARGER

SBC-8188, 8288



Specifications

Models	SBC-8188	SBC-8288
AC Input Voltage	200-240VAC	
AC Frequency Range	50Hz~	
No Load AC Current	<130mA	
Full Load AC Current	<1.2A	
Max. Power	120W	
Optimal Efficiency	80%	
Bulk Charge Current Level (Current Limit)/ Low Temperature Mode	8A	4A
Vbulk (Normal Mode)		
Lead	14.4V	28.8V
AGM 2	14.7V	29.4V
LiFePO4	14.4V	28.8V
Vbulk (Low Temperature Mode)		
Lead	14.7V	29.4V
AGM 2	15.0V	30.0V
LiFePO4	Not apply	

General Specifications

Protections	Short Circuit, Overload, Reverse Polarity, Over Temperature, No spark for battery connected,
Construction	Poly-Carbonate Casing
Operation Temperature	-10°C to 40°C
Cooling System	Natural Convection
Approval	CE EN 55014, 60335, 61000, 62233
Dimension (WxHxD)	225x82x50mm 8.9x3.2x2.0 inch
Weight	720 g 1.6 lbs

* All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE

* All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE