

12V 5A / 24V 2.2A SMART BATTERY CHARGER

SBC-8168, 8268

Introduction

This is a simple to use intelligent battery charger with the latest PWM charging technology controlled by a powerful Micro-Processor Control Unit. It is suitable for all types of lead acid batteries from (5 to 120AH for SBC-8168) (8 to 60AH for SBC-8268).

Features

- Microprocessor Control (MCU) 4 Stage Charging (Repair, Bulk, Absorption, Float) in Pulse Width Modulation PWM method.
- MCU monitors the battery condition from initial qualifying checks, repair, or bulk to absorption to float charges.
- No worries of over or under charging battery, charger can be connected permanently to battery.
- Auto pulse repair charge for deeply depleted battery.
- Suitable for all types of Wet, Gel, AGM lead acid battery from (5 to 120 AH for SBC-8168); (8 to 60AH for SBC-8268).
- Thermal control regulates charging current in hot or enclosed conditions
- Two swappable leads with clamps and eyelet terminal.
- Simple 3 selection key with intuitive iconic LED indicators.
- Universal AC input 100V to 240V

Operation


The Smart Charger runs its own self-tests when connected to an AC source of (100 to 240V).

There are 3 Charge Modes to be selected:

(SBC-8168: Motor Cycle / Car / Cold charge); (SBC-8268: Sealed Lead Acid/ Wet/ Calcium-Calcium charge).

The cold charge has higher voltage and can be used for either low temperature or calcium content battery.

Checks faulty battery


The Smart Charger will scan the battery by injecting short DC pulses. If the battery is found faulty, the  LED flashes until the faulty battery is disconnected.

3 Stage charging with Repair Charging

When the battery is found to be chargeable, the battery will go through constant current Bulk Charge, then a Pulse Width Absorption Charge, and finally a Pulse Float Charge. The charger can be connected to battery permanently without over charge.

Repair charging

If the battery is found to be sulphated, the Smart Charger will use special repair charge pulses to de-sulphate the battery until battery becomes ready for normal bulk charge.

If after 8 hours of repair charge, the battery still cannot be improved, it is then considered to be non- repairable and the  LED will flash until battery is removed.

Safety

The charger only starts charging when it is connected to a battery. So there is no spark in contact with battery terminals.

Reverse Polarity and Short Circuit protections are by electronics with flashing LED and charger will return to normal when the fault is cleared.

A total time for Bulk and Absorption charge is limited to 40 hours to avoid over charging and waste of energy. Therefore it is not suitable for application of charging battery connected to external load connected.

The charger is splash proof as its casing is sealed by ultra sonic.

It is convection cooled and has thermal regulation to lower the charging current until the unit's temperature drops to an acceptable level. In the event of persistent rising temperature the charger will shut down its output at a preset maximum temperature.

General Specifications

Protections	Short Circuit, Overload, Reverse Polarity, Over Temperature, No spark for battery connected, Short output ans 40Hrs max. charging time (for SBC-8268 only).
Construction	Poly-Carbonate Casing, Water Resistant
Cooling System	Natural Convection
Approval	CE EN 55014, 60335, 61000, 62233 and IP55 for body only
Dimension (WxHxD)	150x60x30 mm 5.9x2.4x1.2 inch
Weight	400 g 0.9 lbs

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

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE

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Specifications

Models	SBC-8168
AC Input Voltage	100-240VAC
AC Frequency Range	50/60Hz~
No Load AC Current	100mA@100VAC / 80mA@230VAC
Full Load AC Current	1.5A@100VAC / 1.0A@230VAC
Max. Power	70W
Efficiency	≥78%
Bulk Charge Current Level (Current Limit) for Car/ Low Temperature Mode	5A
Bulk Charge Current Level (Current Limit) for Motor Mode	1.5A
Vbulk@ for Car/ Motor Mode	14.4V
Vbulk@ for Low Temperature Mode	14.7V
Vfloat High Level	13.5V
Vfloat Low Level	12.5V
Ripple & Noise (peak-peak)	<200mV



Accessories:
A battery Charger with lead terminals
Detachable leads with crocodile clips
Connecting leads with ring terminals

Models	SBC-8268
AC Input Voltage	100-240VAC
AC Frequency Range	50/60Hz~
No Load AC Current	100mA@100VAC / 80mA@230VAC
Full Load AC Current	1.3A@100VAC / 1.0A@230VAC
Max. Power	65W
Efficiency	≥80%
Bulk Charge Max. Current Level (Current Limit) for All Mode	2.2A
Vbulk@ for Sealed Lead Acid Mode	28.4V
Vbulk@ for Wet Mode	28.8V
Vbulk@ for Calcium-Calcium Mode	29.6V
Ripple & Noise (peak-peak)	<200mV



Accessories:
A battery Charger with lead terminals
Detachable leads with crocodile clips
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