

12V 3-STAGE LEAD ACID BATTERY CHARGER

SBC-2110, 2205, 2115, 2207, 2120, 2210

Description

This series of 3 Stage chargers have 3 specific settings for Wet, Cal-Cal, AGM & GEL type battery to ensure fast, complete and safe charging of your battery as required by the manufacturers.

Soft Start Bulk Charge an pre-bulk charge for drained out battery.

The charger gives 50% of full constant current charge when it detects the battery is over depleted at less than 9V/ 18V terminal voltage. When battery voltage rises to 11V/ 21V the charger will resume the normal constant full current Bulk, constant voltage Absorption and Float charge stages.

In the Power Supply mode, the charger provides a constant voltage dc power to the external load connected to the battery and at the same time without over charging the battery. This is ideal for caravan and other battery backup applications. The Power Supply Mode output voltage is the selected Float Voltage.

The optional temperature sensor adjusts the charging voltages with the changes in ambient temperatures of the battery. This effectively prevents over and under charging the battery in hot summer days to cold wintry nights.

Only the 10Amp SBC-2110/ 5Amp SBC-2205 model has convection cooling and one charging bank, others have thermal control fan cooling (zero to full speed) and dual charging banks.

The Over Voltage protection, in the case of component failure causing uncontrolled high voltage at the output, the charger will limit the voltage less than 17.5V/ 34V to prevent damage to the battery and connected load.

Features

- 3 Stage (IuOu) switching mode lead acid battery charger.
- 3 Battery Type (Wet/ Cal-Cal/ AGM & GEL) selections.
- 3 Float Voltage Settings (13.2/13.5/13.8V) (26.4/ 27.0/ 27.6V) selections.
- Battery can be connected to charger permanently.
- Power Supply/Charger Mode selection
The power supply mode is ideal to charge battery with load and keeps battery fully charged.
- Automatic Soft Start Bulk Charge to ensure a safe and gentle initial charging for deeply drained battery.
- Temperature compensation with optional remote sensor to prevent over and under charging battery at high and low ambient battery ambient temperature.
- Dual LED indicators for Bulk, Absorption, Float charge stage; Fault, Power/ Charger Mode and Power On.
- Power On-Off Switch.
- Silent fan cool operation--The thermal control cooling fan with variable speed moves when ambient temperature of charger exceeds 40°C.
- Protections to the charger Short circuit, Over Load, Over temperature.
- Reversed Polarity (thermal fused).
- Protection to the battery and load OVP
The charger will keep output voltage less than 17.5V/ 34V to prevent damage to the battery and load.

General Specifications

Protections	Short Circuit, Overload, Reverse Polarity, Over Temperature, OVP (Output Over Voltage Protection)
Thermostatically Controlled Variable Speed Fan (0 to full speed)	SBC-2115, 2120, 2207, 2210
Convection Cool	SBC-2110, 2205
Approval	CE EN 60335 EN 55014
Charge Cycle, Protection Indication	Separate LED for Bulk, Absorption, Float and Fault Mode Power ON/ OFF LED Indicator
Power ON/ OFF Switch	Yes
Temperature Sensor Socket	Yes
Anodized Aluminum Casing with Mounting Flange	Yes
Dimension (WxHxD)	160x61x173 mm 6.3x2.4x6.8 inch (SBC-2110, 2115, 2205, 2207) 160x61x207 mm 6.3x2.4x8.2 inch (SBC-2120, 2210)
Weight	1.3 kg 2.9 lbs (SBC-2110, 2205) 1.4 kg 3.1 lbs (SBC-2115, 2207) 1.6 kg 3.5 lbs (SBC-2120, 2210)
Included Accessories	AC Power Cord, Spare fuse
Remark	110VAC 60Hz~ (Input on request)

* 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-2110	SBC-2115	SBC-2120
AC Input Voltage 180-260VAC, 50Hz~	Yes		
AC Input Current @ Full Load at 230VAC	1.2A	1.8A	3A
Output (Charge) Voltage Selections (2 battery type)			
Absorption Voltage for AGM/ GEL Battery (14.0V to 14.2V)	Yes		
Absorption Voltage for WET Battery (14.3V to 14.5V)	Yes		
Absorption Voltage for Calcium-Calcium Battery (15.5V to 15.7V)	Yes		
Float Voltage 1 (13.2V)	Yes		
Float Voltage 2 (13.5V)	Yes		
Float Voltage 3 (13.8V)	Yes		
Maximum Output Charging Current (continuous)	10A	15A	20A
Soft Start Bulk Charge			
Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode	<9V		
Soft Start Bulk Charge Current Level (current limit)	5A	7.5A	10A
Ripple & Noise (peak-peak)	<100mV	<100mV	<150mV
Efficiency at Maximum Power	≥90%	≥87%	≥82%
Selectable Charger/ Power Supply Mode (13.2/ 13.5/ 13.8V)	Yes		
Dual Bank (Outputs) Simultaneously Charging two Batteries (The two batteries must be of same chemistry, construction & type)	No	Yes	Yes
Recommended Battery Capacity Range	40-100AH	60-150AH	80-200AH

Models	SBC-2205	SBC-2207	SBC-2210
AC Input Voltage 180-260VAC, 50Hz~	Yes		
AC Input Current @ Full Load at 230VAC	1.2A	1.8A	2.4A
Output (Charge) Voltage Selections (2 battery type)			
Absorption Voltage for AGM/ GEL Battery (28.0V to 28.4V)	Yes		
Absorption Voltage for WET Battery (28.6V to 29V)	Yes		
Absorption Voltage for Calcium-Calcium Battery (30.9V to 31.3V)	Yes		
Float Voltage 1 (26.4V)	Yes		
Float Voltage 2 (27V)	Yes		
Float Voltage 3 (27.6V)	Yes		
Maximum Output Charging Current (continuous)	5A	7.5A	10A
Soft Start Bulk Charge			
Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode	<18V		
Soft Start Bulk Charge Current Level (current limit)	2.5A	3.8A	5A
Ripple & Noise (peak-peak)	<100mV	<100mV	<150mV
Efficiency at Maximum Power	≥90%	≥87%	≥82%
Selectable Charger/ Power Supply Mode (13.2/ 13.5/ 13.8V)	Yes		
Dual Bank (Outputs) Simultaneously Charging two Batteries (The two batteries must be of same chemistry, construction & type)	No	Yes	Yes
Recommended Battery Capacity Range	20-50AH	30-80AH	40-100AH

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