

3-STAGE LEAD ACID BATTERY CHARGER

with High Efficiency Zero Voltage Switching Mode Design
SBC-2130, 2140, 2150, 2215, 2220, 2225, 2408, 2410, 2413

Description

Zero Voltage Switching design is used for good reliability, high efficiency and energy saving for this series of high current chargers.

The 3 Stage chargers have 4 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 automatic pre-bulk charging for drained out battery. The charger gives 50% of full constant current charge when it detects the battery is deeply depleted at less than (9V for SBC-2130, 2140, 2150); (18V for SBC-2215, 2220, 2225); (36V for SBC-2408, 2410, 2413) terminal voltage. When battery voltage rises to (11V for SBC-2130, 2140, 2150); (21V for SBC-2215, 2220, 2225); (42V for SBC-2408, 2410, 2413) 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 to the external load connected to the battery and at the same time fills up the battery without over charge. This is ideal for caravan and other battery backup applications. The Power Supply Mode output voltage is the same as the selected Float Voltage.

The optional remote control panel shows the charging stage, each battery voltage and turns the output on and off as well.

A remote temperature sensor (ATS-5200) comes with every charger. It 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.

The charger has thermal control fan cooling (zero to full speed) and dual charging banks.

The Over Voltage protection, the output of charger will keep the voltage at less than (17.5V for SBC-2130, 2140, 2150); (34V for SBC-2215, 2220, 2225); (67V for SBC-2408, 2410, 2413) in the event of loss of regulation in the charger to prevent damage to the battery and connected load.

Features

- Wide AC input tolerance 90V to 264V, 60/ 50Hz~.
- Zero Voltage Switching (ZVS) circuit design for high reliability& efficiency.
- 3 Stage (IUoU) switching mode lead acid battery charger.
- 4 Battery Type (Wet/ Cal-Cal/ AGM/ GEL) selections.
- 3 Float Voltage Settings (13.2/ 13.5/ 13.8V for SBC-2130, 2140, 2150); (26.4/ 27/ 27.6V for SBC-2215, 2220, 2225); (52.8/ 54/ 55.2V for SBC-2408, 2410, 2413) selections.
- Battery can be connected to charger permanently.
- Power Supply 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.
- Remote temperature sensor (model ATS-5200) is included.
It prevents 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 at 45°C and off at 40°C.
- Protections to the charger --- Short circuit, Over Load, Over temperature, Reversed Polarity (thermal fused).
- Protection to the battery and load --- by Output Over Voltage Protection OVP.

General Specifications

Protections	Short Circuit, Overload, Reverse Polarity (fused), Over Temperature, OVP (Output Over Voltage Protection)
Cooling Method	Thermostatically Controlled Variable Speed Fan (0 to full speed)
Approval	CE EN 60335 EN 55014 EN 50336
Charge Cycle, Protection Indication	Separate LED for Bulk, Absorption, Float and Fault Mode Power ON/ OFF LED Indicator
Power ON/ OFF Switch	Yes
Remote Control & Temperature Sensor Socket	Yes
Anodized Aluminum Casing with Mounting Flange	Yes
Dimension (WxHxD)	220x80x200 mm 8.7x3.2x7.9 inch (SBC-2130, 2215, 2408) 220x80x261 mm 8.7x3.2x10.3 inch (SBC-2140, 2150, 2220, 2225, 2410, 2413)
Weight	2.4 kg 5.3 lbs (SBC-2130, 2215, 2408) 3.0 kg 6.6 lbs (SBC-2140, 2220, 2410) 3.2 kg 7.0 lbs (SBC-2150, 2225, 2413)
Included Accessories	AC Power Cord, Temperature Sensor, Spare fuse

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Specifications

Models	SBC-2130	SBC-2140	SBC-2150
AC Input Voltage 100-240VAC, 50/60Hz~	Yes		
AC Input Current @ Full Load at 100/ 230VAC	5.9/ 2.6A	7.5/ 3.2A	9.4/ 4.0A
Output (Charge) Voltage Selections			
Absorption Voltage for GEL Battery (14.0V to 14.2V)	Yes		
Absorption Voltage for AGM Battery (14.2V to 14.4V)	Yes		
Absorption Voltage for WET Battery (14.3V to 14.5V)	Yes		
Absorption Voltage for Calcium-Calcium Battery (15.4V to 15.6V)	Yes		
Float Voltage 1 (13.2V)	Yes		
Float Voltage 2 (13.5V)	Yes		
Float Voltage 3 (13.8V)	Yes		
Maximum Output Charging Current (continuous)	30A	40A	50A
Soft Start Bulk Charge			
Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode	<9V		
Soft Start Bulk Charge Current Level (current limit)	15A	20A	25A
Ripple & Noise (peak-peak)	<200mV		
Efficiency at Maximum Power	≥83/ 87%		
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)	Yes		
Recommended Battery Capacity Range	100-300AH	120-400AH	150-500AH

Models	SBC-2215	SBC-2220	SBC-2225
AC Input Voltage 100-240VAC, 50/60Hz~	Yes		
AC Input Current @ Full Load at 100/ 230VAC	5.9/ 2.4A	7.4/ 3.2A	9.2/ 3.9A
Output (Charge) Voltage Selections			
Absorption Voltage for GEL Battery (28.0V to 28.4V)	Yes		
Absorption Voltage for AGM Battery (28.4V to 28.8V)	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)	15A	20A	25A
Soft Start Bulk Charge			
Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode	<18V		
Soft Start Bulk Charge Current Level (current limit)	7.3A	9.5A	11A
Ripple & Noise (peak-peak)	<250mV		
Efficiency at Maximum Power	≥86/ 90%		
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)	Yes		
Recommended Battery Capacity Range	50-150AH	70-200AH	80-250AH

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Specifications

Models	SBC-2408	SBC-2410	SBC-2413
AC Input Voltage 100-240VAC, 50/60Hz~	Yes		
AC Input Current @ Full Load at 100/ 230VAC	5.6/ 2.5A	7.3/ 3.1A	9.5/ 4.1A
Output (Charge) Voltage Selections			
Absorption Voltage for GEL Battery (56.0V to 56.8V)	Yes		
Absorption Voltage for AGM Battery (56.8V to 57.6V)	Yes		
Absorption Voltage for WET Battery (57.2V to 58.0V)	Yes		
Absorption Voltage for Calcium-Calcium Battery (61.8V to 62.6V)	Yes		
Float Voltage 1 (52.8V)	Yes		
Float Voltage 2 (54.0V)	Yes		
Float Voltage 3 (55.2V)	Yes		
Maximum Output Charging Current (continuous)	8A	10A	13A
Soft Start Bulk Charge			
Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode	<36V		
Soft Start Bulk Charge Current Level (current limit)	3.8A	4.8A	6A
Ripple & Noise (peak-peak)	<400mV		
Efficiency at Maximum Power	≥86/ 90%		
Selectable Charger/ Power Supply Mode (13.2/ 13.5/ 13.8V)	Yes		
Dual Bank (Outputs) Simultaneously Charging two Batteries <i>(The two batteries must be of same chemistry, construction & type)</i>	Yes		
Recommended Battery Capacity Range	30-80AH	30-100AH	40-150AH

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