

# 3 Stage Lead-Acid Battery Charger with Charger / Power Supply Mode SBC - 2205(5A) / 2207(7.5A) / 2210(10A) 24VDC Series

## Description

This series of switching mode 3 stage (IUoU) chargers is designed for wet, sealed (RVLA), calcium-calcium, gel in both SLI (car) and deep cycle type of lead acid batteries.

It has 3 selections of bulk (with absorption) charge and 3 float charge voltage making a total of 9 combinations of charging profile. This is to ensure a safe, fast and complete charge as required by different types of lead acid batteries and applications.

It also has a soft start bulk charge at about 50% of full rated current when battery has been depleted to less than 20.5V open circuit voltage to give a gentle initial charge for deeply exhausted batteries.

The unique selectable Power Supply - Charger Mode provides a nominal 24V DC source (per chosen float voltage) for external load and at the same time not to over charge the battery but keeping the battery fully charged. It is ideal for caravan& other battery back up applications.

With the optional temperature sensor, the charger operates accurately over a wide range of ambient temperature preventing over or under charging the battery.

The 7.5A and 10A Model SBC-2207/2210 have thermostatically control fan cool, they also have dual output banks for charging two batteries simultaneously.

The streamline, low profile anodized aluminum casing, efficient switching mode circuit design and variable speed fan make it a super quiet and cool running charger and power supply.

In addition to the standard short circuit, over temperature, reverse polarity protections, it has an OVP (output over-voltage protection) to ensure complete protection of your battery and connected load.



## Features

- \*\* 3 Stage (IUoU) Switching Mode Lead Acid Battery Charger
- \*\* 3 Selectable Bulk Absorption Charge Settings  
For Gel, Wet and Calcium-Calcium lead acid battery.
- \*\* 3 Selectable and independent Float Voltage Settings  
A total of 9 combinations of adaptive 3 Stage Charging profiles for all types of VRLA (sealed) and Wet lead acid, SLI (car) and Deep Cycled lead acid battery.
- \*\* Battery can be connected to charge indefinitely.
- \*\* Automatic Soft Start Bulk Charge for deeply exhausted battery  
To ensure safe and gentle charging of heavily depleted deep cycle battery and car battery.
- \*\* Temperature Compensation (with optional remote sensor )  
To prevent over-charging or under-charging battery at high / low ambient temperature
- \*\* Dual LED indicators for Bulk, Absorption, Float, Fault and Power-On .
- \*\* Dual Banks for simultaneous charging of two batteries.  
Two positive charging outputs. Not for 5Amp model.
- \*\* Power On Off Switch  
This is handy especially in the Power Supply - Charger Mode.
- \*\* Power Supply - Charger Mode  
When switched to the Power Supply - Charger Mode, it can be used as constant voltage power supply (according to the selected Float voltage: 26.4/27.0/27.6V) or as a charger /power supply when connected to a battery and external load in parallel .
- \*\* Silent fan cool operation  
The thermostatic control variable speed (zero to full speed) does not move at Float Charge or when ambient temperature is lower than 40°C
- \*\* Protections to the charger  
Short Circuit, Over Load, Over Temperature, Reversed Polarity(fused).
- \*\* Protection to the battery and load  
The OVP protects the load and battery from excessive over- voltage at the charger output.
- \*\* Wide Input Tolerance for fluctuating mains voltage  
It operates well from 180V to 260V.

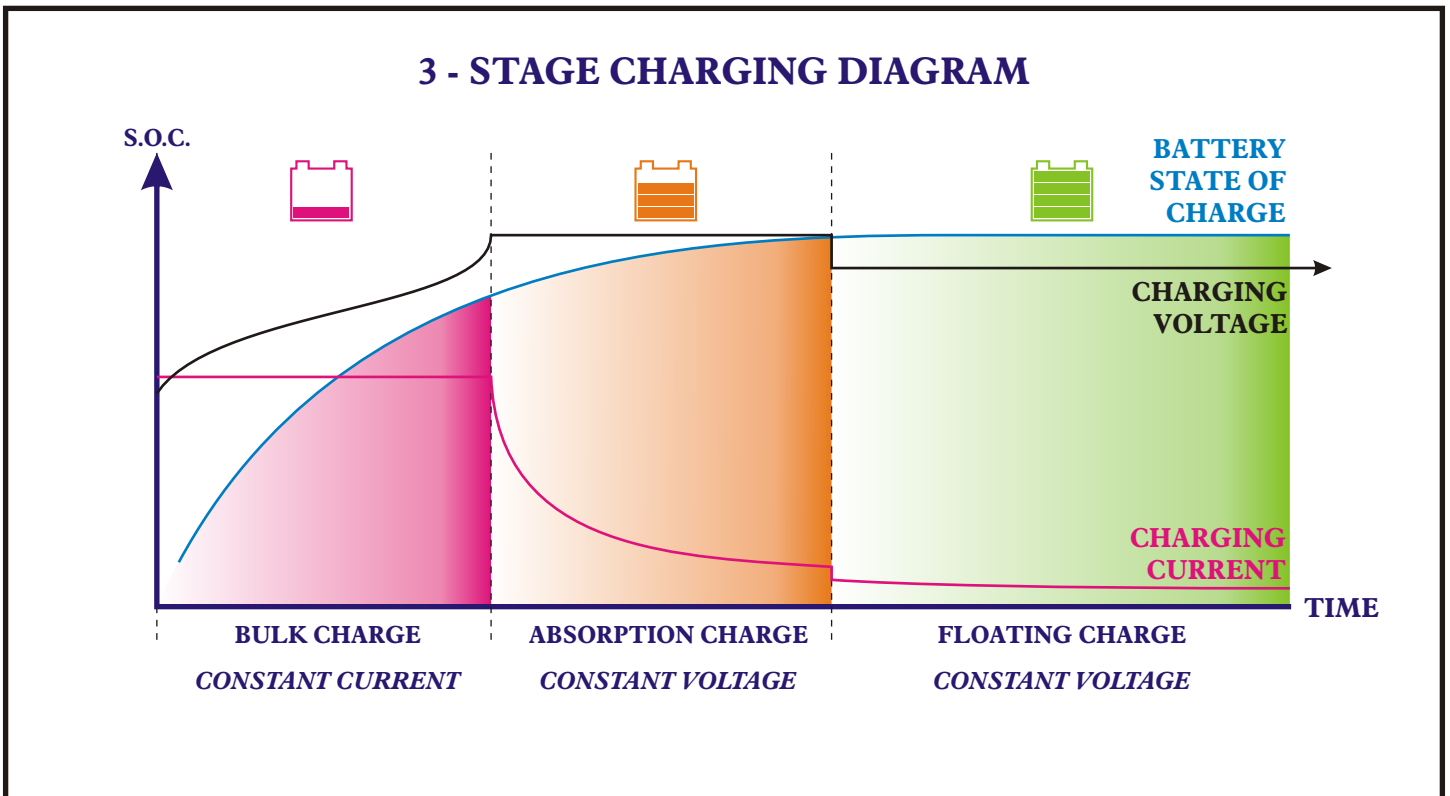
All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

\* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE \*

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## Specifications

	SBC - 2205	SBC - 2207	SBC - 2210
AC Input Voltage 180-260V, 50Hz~	Yes	Yes	Yes
AC Input Current at full load at 230Vac	1.2A	1.8A	3A
Output (Charge) Voltage Selections :			
Absorption Voltage for AGM/GEL battery (28.2V to 28.6V)	Yes	Yes	Yes
Absorption Voltage for WET battery (29.2V to 29.6V)	Yes	Yes	Yes
Absorption Voltage for Calcium-Calcium battery (32.4V to 32.7V)	Yes	Yes	Yes
Float Voltage 1 (26.4V)	Yes	Yes	Yes
Float Voltage 1 (27.0V)	Yes	Yes	Yes
Float Voltage 1 (27.6V)	Yes	Yes	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	< 20.5V	< 20.5V	< 20.5V
Soft Start Bulk Charge Current Level (Current Limit)	2.5A	3.8A	5A
Line Regulation (180V to 260V) for Charging Current	< 0.6%	< 0.6%	< 0.6%
Ripple and Noise (Peak to Peak)	100mV	100mV	150mV
Efficiency at Maximum Power	90%	87%	82%
Selectable Charger / Power Supply Mode (26.4 / 27.0 / 27.6V )	Yes	Yes	Yes
Dual Banks (Outputs) Simultaneously Charging two Batteries (The two batteries must be of same chemistry, construction & type.)	No	Yes	Yes
Protection :			
Overload Protection	Yes	Yes	Yes
Short Circuit Protection	Yes	Yes	Yes
Reverse Polarity Protection (Fused)	Yes	Yes	Yes
Over Temperature Protection	Yes	Yes	Yes
OVP (Output Over Voltage Protected)	Yes	Yes	Yes
Thermostatically Controlled Variable Speed Fan (0 to full speed)	Convection Cool	Yes	Yes
CE Approvals and Standard ( EN 55014 , EN 60335 )	Yes	Yes	Yes
Charge Cycle, Protection Indication :			
Separate LED for Bulk, Absorption, Float and Fault Mode	Yes	Yes	Yes
Power ON-OFF LED Indicator	Yes	Yes	Yes
Power ON-OFF Switch	Yes	Yes	Yes
Temperature Sensor Socket	Yes	Yes	Yes
Anodized Aluminum Casing with Mounting Flange	Yes	Yes	Yes
Size in mm (Width x Height x Depth)	160 x 61 x 173mm	160 x 61 x 173mm	160 x 61 x 207mm
Weight in Kg	1.3kg	1.4kg	1.6kg
Included Accessories (Cable, Spare Fuse)	Yes	Yes	Yes
Optional Accessories (Remote Temperature Sensor)	Not Included	Not Included	Not Included
Recommended Battery Capacity Range	20AH to 50AH	30AH to 80AH	40AH to 100AH
Remarks	110VAC 60Hz ~ Input on Request		



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