

Description

This is a deluxe version of SBC-9138/ 9238, it is designed for more inquisitive users who want to monitor the real time status of the charging stages in a graphic presentation, charging voltage and current, and how much Ampere Hours have been fed into the batteries. Other important information such as selected battery type, setting of maximum charging current, and in the case of fault, type of fault are also displayed in the LCD.

The software based MCU control 7 stage smart charger is designed with user friendly features and software plus hardware protections. It is a set, connect and forget charger that ensures complete recharge of your battery. Your battery can be connected indefinitely to the charger which will enter into energy conservation mode to prevent over charging and save electricity bills. The battery state of charge and temperature are closely monitored, updated, & logged by the MCU and the remote temperature sensor mounted on the supplied charger cable and heavy duty battery clamps. Though the charger basically is engineered to charge high capacity battery/ banks, it can be made to charge much smaller battery by selecting the right reduced output setting. This charger can also be converted to a fixed voltage power supply with one simple concealed switch setting.

The extensive protections with alarm & LCD indications including the thermostatic decrease of charging current to shut down ensure a durable working life span even in harsh conditions for the charger and the battery. There are selections for Wet, AGM, GEL, and Calcium-Calcium battery types Special evaluation, re-conditioning charging profiles are made for the Wet type battery.



Features

- Software based MCU control 7 Stage Lead Acid Battery Charger
- Fixed Voltage Power Supply selectable Selectable for Wet/ AGM/ GEL & Calcium-Calcium batteries showed in LCD Adjustable maximum charging current from 20% to 100% for wide range
- of Battery AH.
- Extensive protections with alarm and LCD indications . Auto decrease of charging current in high working temperature to shut down
- LCD graphic indication for each of the charging stage and the 8 protection status
- . LCD displays real time Charging Voltage, Current & Ampere Hours to battery.
- Supplied with charging cable and clamp mounted with the wired remote temperature sensor

Specifications

AC input Voltage 200 - 240VAC, 50Hz~ Yes AC input Current at Full Load (at 230VAC) 2.9A Output (Charge) Voltage Selections WET 14.4 V 13.5V 28.8V 27.0V AGM 14.3V 13.2V 28.6V 26.4V GEL 14.1V 13.7V 28.2V 27.4V CALCIUM 15.1V 13.7V 28.2V 27.6V Recondition (for WET battery only) 15.9V / 3A 30.2V 27.6V Maximum Output Charging Current 25A 13.4V 26.6V Maximum Output Charging Current 25A 13.4V Soft Start Bulk Charge Battery Voltage Toriger (cut-in) Soft Start Bulk Charge Mode 11.1V <22V Soft Start Bulk Charge Battery Voltage Toriger (cut-in) Soft Start Bulk Charge Mode 211V <22V Soft Start Bulk Charge Current Level (current limit) 1/2 of the charging current Ripple & Noise (Peak to Peak) 200mV Efficiency at WET (230VAC) 85% Protections Short Circuit Protection Yes Short Circuit Protection Yes Neverse Polarity Protection (by Mosfet)) Yes Over Tamperature Protection Yes Thermostatically Controlled Valable Speed Fran (0 - full speed) Approvals Charge Cycle, Protection Indication LCD Graphic each Charging Stage and Protection Status Yes Plastic housing w/Mounting flange Yes Dimension (WstKD) 220×80×140mm 8.7x3.2x5.5inch. Weight Accessories (Charging Cable with Battery Clamp) Yes	specifications					
AC Input Current at Full Load (at 230VAC) 2.9A Output (Charge) Voltage Selections Absorption Float Absorption Float WET 14.4V 13.5V 28.8V 27.0V AGM 14.3V 13.2V 28.6V 26.4V GEL 14.1V 13.7V 28.2V 27.4V CALCIUM 15.1V 13.8V 30.2V 27.6V Recondition (for WET battery only) 15.9V / 3A 31.8V / 3A 26.6V Maximum Output Charging Current 25A 13A 30.2V 27.6V Soft Start Bulk Charge 13.3V 26.6V 26.4V 20.0V	Model	SBC - 9138 SBC - 9238				
Output (Charge) Voltage Selections Absorption Float Absorption Float WET 14.4V 13.5V 28.8V 27.0V AGM 14.3V 13.2V 28.8V 26.4V GEL 14.1V 13.7V 28.2V 27.4V CALCIUM 15.1V 13.8V 30.2V 27.6V Recondition (for WET battery only) 15.9V / 3A 31.8V / 3A	AC Input Voltage 200 - 240VAC, 50Hz~	Yes				
Absorption Float Absorption Float WET 14.4V 13.5V 28.8V 27.0V AGM 14.4V 13.5V 28.8V 27.0V AGM 14.1V 13.7V 28.2V 26.4V GEL 14.1V 13.7V 28.2V 27.4V CALCUM 15.1V 13.8V 30.2V 27.6V Recondition (for WET battery only) 15.9V / 3A 31.8V / 3A Power Supply Mode 13.3V 26.6V Maximum Output Charging Current 25A 13A Soft Start Bulk Charge Current Level (current limit) 1/2 of the charging current Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode <11V <22V Soft Start Bulk Charge Current Level (current limit) 1/2 of the charging current <22V Reprotections <200mV <85% Short Circuit Protection Yes Over foar porture fright fixed Over Voltage Protection Selectable) Yes Thermal decrease of charger output power Yes Approvals CE E N 60335 EN 55014 EN 62233 Charger Cycle, Protection Indication Yes LCD Graphic each Charging Stage and Protection Status Yes <th>AC Input Current at Full Load (at 230VAC)</th> <th colspan="4">2.9A</th>	AC Input Current at Full Load (at 230VAC)	2.9A				
WET 14.4√ 13.5√ 28.8√ 27.0√ AGM 14.3√ 13.2√ 28.6√ 26.4√ GEL 14.3√ 13.2√ 28.6√ 26.4√ GEL 14.1√ 13.7√ 28.2√ 27.4√ CALCIUM 15.1√ 13.8√ 30.2√ 27.6√ Recondition (for WET battery only) 15.9√/3A 31.8√/3A 26.6√ Maximum Output Charging Current 25.4 13.4 Soft Start Bulk Charge 13.3√ 26.6√ Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode <11√ Soft Start Bulk Charge Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode <11√ Soft Start Bulk Charge <200mV Reverse Polarity Protection Yes Over fomperature Protection Yes	Output (Charge) Voltage Selections					
AGM 14.3V 13.2V 28.6V 26.4V GEL 14.1V 13.7V 28.2V 27.4V CALCIUM 15.1V 13.8V 30.2V 27.6V Recondition (for WET battery only) 15.9V / 3A 30.2V 27.6V Power Supply Mode 13.3V 30.2V 27.6V Maximum Output Charging Current 25A 13.8V / 3A 26.6V Soft Start Bulk Charge 25A 13A 26.6V Soft Start Bulk Charge Current Level (current limit) 1/2 of the charging current <22V Soft Start Bulk Charge Current Level (current limit) 1/2 of the charging current <22V Soft Start Bulk Charge Current Level (current limit) 1/2 of the charging current <22V Soft Circuit Protection >85% Protections Yes Short Circuit Protection (by Mosfet)) Yes Over load Protection (by Mosfet)) Yes OVer Cutput Tracking/ Fixed Over Voltage Protection Selectable Yes		Absorption	Float	Absorption	Float	
GEL 14.1∨ 13.7∨ 28.2∨ 27.4∨ CALCIUM 15.1∨ 13.8∨ 30.2∨ 27.6∨ Recondition (for WET battery only) 15.9∨ / 3A 31.8∨ / 3A 26.6∨ 27.6∨ Power Supply Mode 13.3∨ 26.6∨ 31.8∨ / 3A 26.6∨ 33.8∨ 26.6∨ 33.8∨ 26.6∨ 33.8∨ 26.6∨ 33.8∨ 30.2∨ 27.6∨ 34.8∨ 30.2∨ 27.6∨ 35.8∨ 35.8∨ 35.8∨ 35.8∨ 35.8∨ 35.8∨ 35.8∨ 35.8∨ 35.8∨ 36.8∨	WET	14.4V	13.5V	28.8V	27.0V	
CALCIUM15.1V13.8V30.2V27.6VRecondition (for WET battery only)15.9V / 3A31.8V / 3A31.8V / 3APower Supply Mode13.3V26.6V26.6VMaximum Output Charging Current25A13ASoft Start Bulk Charge11V<22VBattery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode<11V<22VSoft Start Bulk Charge Current Level (current limit)1/2 of the charging current<22VSoft Start Bulk Charge Current Level (current limit)1/2 of the charging current<22VEfficiency at WET (230VAC)>85%ProtectionsYesShort Circuit ProtectionYesOverload ProtectionYesReverse Polarity Protection (by Mosfet))YesOver Temperature ProtectionYesThermal decrease of charger output powerYesTherma decrease of charger output powerYesTherma decrease of charger output powerYesSharge Cycle, Protection IndicationYesLCD Graphic each Charging Stage and Protection StatusYesBuild in temperature sensor in battery clampYesPlastic housing w/Mounting flangeYesDimension (WxtXD)220x80x140mm8.7x3.2x5.5inch.WeightAccessories (Charging Cable with Battery Clamp)Yes	AGM	14.3V	13.2V	28.6V	26.4V	
Recondition (for WET battery only)15.9V / 3A31.8V / 3APower Supply Mode13.3V26.6VMaximum Output Charging Current25A13ASoft Start Bulk Charge13A36Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode<11V<22VSoft Start Bulk Charge Current Level (current limit)1/2 of the charging current<22VSoft Start Bulk Charge Current Level (current limit)1/2 of the charging current<22VRipple & Noise (Peak to Peak)<200m/V<28%Efficiency at WET (230VAC)>88%ProtectionsYesShort Circuit Protection (by Mosfet))YesOverload Protection (by Mosfet))YesOver Temperature Protection (by Mosfet))YesOVer Cutput Tracking/ Fixed Over Voltage Protection Selectable)YesThermal decrease of charger output powerYesCharge Cycle, Protection IndicationYesLCD Graphic each Charging Stage and Protection StatusYesBuild in temperature sensor in battery clampYesPlastic housing w/Mounting flangeYesDimension (WXHXD)220x80x140mm8.7x3.2x5.5inch.WeightZkg 4.4lbs.Accessories (Charging Cable with Battery Clamp)Yes	GEL	14.1V	13.7V	28.2V	27.4V	
Power Supply Mode 13.3V 26.6V Maximum Output Charging Current 25A 13A Soft Start Bulk Charge	CALCIUM	15.1V	13.8V	30.2V	27.6V	
Maximum Output Charging Current 25A 13A Soft Start Bulk Charge	Recondition (for WET battery only)	15.9V / 3A 31.8V / 3A				
Soft Start Bulk Charge <11V <22V Soft Start Bulk Charge Current Level (current limit) 1/2 of the charging current <22V Ripple & Noise (Peak to Peak) <200mV Efficiency at WET (230VAC) >85% Protections Short Circuit Protection Yes Overload Protection (by Mosfet)) Yes Over Temperature Protection (by Mosfet)) Yes OVP (Output Tracking/ Fixed Over Voltage Protection Selectable) Yes Thermal decrease of charger output power Yes Thermal decrease of charger output power Yes Approvals CE EN 60335 EN 55014 EN 62233 Charge Cycle, Protection Indication Yes LCD Graphic each Charging Stage and Protection Status Yes Build in temperature sensor in battery clamp Yes Plastic housing w/Mounting flange Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. Weight 2kg <th>Power Supply Mode</th> <th colspan="3">13.3V 26.6V</th> <th></th>	Power Supply Mode	13.3V 26.6V				
Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode <11V <22V Soft Start Bulk Charge Current Level (current limit) 1/2 of the charging current Ripple & Noise (Peak to Peak) <200mV Efficiency at WET (230VAC) >85% Protections Short Circuit Protection Yes Overload Protection (by Mosfet)) Yes Over Temperature Protection Yes OVP (Output Tracking/ Fixed Over Voltage Protection Selectable) Yes Thermostatically Controlled Variable Speed Fan (0 - full speed) Yes Approvals CE EN 60335 EN 55014 EN 62233 Charge Cycle, Protection Indication Yes LCD Graphic each Charging Stage and Protection Status Yes Build in temperature sensor in battery clamp Yes Plastic housing w/Mounting flange Yes Meight 220x80x140mm 8.7x3.2x5.5inch. Keight <th>Maximum Output Charging Current</th> <th colspan="3">25A 13A</th>	Maximum Output Charging Current	25A 13A				
Soft Start Bulk Charge Current Level (current limit) 1/2 of the charging current Ripple & Noise (Peak to Peak) <200mV Efficiency at WET (230VAC) >85% Protections >85% Short Circuit Protection Yes Overload Protection Yes Reverse Polarity Protection (by Mosfet)) Yes OVer (Output Tracking/ Fixed Over Voltage Protection Selectable) Yes Thermal decrease of charger output power Yes Thermostatically Controlled Variable Speed Fan (0 - full speed) Yes Approvals CE EN 60335 EN 55014 EN 62233 Charge Cycle, Protection Indication Yes Plastic housing w/Mounting flange Yes Plastic housing w/Mounting flange Yes Plastic housing w/Mounting flange Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. Weight Zkg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes Yes Yes	Soft Start Bulk Charge					
Ripple & Noise (Peak to Peak) <200mV Efficiency at WET (230VAC) >85% Protections Short Circuit Protection Yes Overload Protection Yes Overload Protection (by Mosfet)) Yes Over Temperature Protection (by Mosfet)) Yes OVer Temperature Protection Yes OVP (Output Tracking/ Fixed Over Voltage Protection Selectable) Yes Thermal decrease of charger output power Yes Thermostatically Controlled Variable Speed Fan (0 - full speed) Yes Approvals CE EN 60335 EN 55014 EN 62233 Charge Cycle, Protection Indication Yes LCD Graphic each Charging Stage and Protection Status Yes Build in temperature sensor in battery clamp Yes Plastic housing w/Mounting flange Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. Weight 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes	Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode	<11V <22V				
Efficiency at WET (230VAC) >85% Protections Yes Short Circuit Protection Yes Overload Protection Yes Reverse Polarity Protection (by Mosfet)) Yes Over Temperature Protection Yes OVP (Output Tracking/ Fixed Over Voltage Protection Selectable) Yes OVP (Output Tracking/ Fixed Over Voltage Protection Selectable) Yes Thermal decrease of charger output power Yes Thermostatically Controlled Variable Speed Fan (0 - full speed) Yes Approvals CE EN 60335 EN 55014 EN 62233 Charge Cycle, Protection Indication LCD Graphic each Charging Stage and Protection Status Yes Build in temperature sensor in battery clamp Yes Plastic housing w/Mounting flange Yes Dimension (WXHxD) 220x80x140mm 8.7x3.2x5.5inch. Weight 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes Yes Yes	Soft Start Bulk Charge Current Level (current limit)	1/2 of the charging current				
Protections Yes Short Circuit Protection Yes Overload Protection Yes Reverse Polarity Protection (by Mosfet)) Yes Over Temperature Protection Yes OVP (Output Tracking/ Fixed Over Voltage Protection Selectable) Yes Thermal decrease of charger output power Yes Thermostatically Controlled Variable Speed Fan (0 - full speed) Yes Approvals CE EN 60335 EN 55014 EN 62233 Charge Cycle, Protection Indication LCD Graphic each Charging Stage and Protection Status Yes Build in temperature sensor in battery clamp Yes Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. Weight 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes	Ripple & Noise (Peak to Peak)	<200mV				
Short Circuit Protection Yes Overload Protection Yes Reverse Polarity Protection (by Mosfet)) Yes Over Temperature Protection Yes OVP (Output Tracking/ Fixed Over Voltage Protection Selectable) Yes Thermal decrease of charger output power Yes Thermostatically Controlled Variable Speed Fan (0 - full speed) Yes Approvals CE EN 60335 EN 55014 EN 62233 Charge Cycle, Protection Indication LCD Graphic each Charging Stage and Protection Status Yes Build in temperature sensor in battery clamp Yes Plastic housing w/Mounting flange Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. Weight 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes Les Les <td< th=""><th>Efficiency at WET (230VAC)</th><th colspan="4">>85%</th></td<>	Efficiency at WET (230VAC)	>85%				
Overload ProtectionYesReverse Polarity Protection (by Mosfet))YesOver Temperature ProtectionYesOVP (Output Tracking/ Fixed Over Voltage Protection Selectable)YesThermal decrease of charger output powerYesThermostatically Controlled Variable Speed Fan (0 - full speed)YesApprovalsCEEN 60335EN 55014EN 62233Charge Cycle, Protection IndicationYesLCD Graphic each Charging Stage and Protection StatusYesBuild in temperature sensor in battery clampYesPlastic housing w/Mounting flangeYesDimension (WxHxD)220x80x140mm8.7x3.2x5.5inch.Weight2kg4.4lbs.Accessories (Charging Cable with Battery Clamp)Yes	Protections					
Reverse Polarity Protection (by Mosfet)) Yes Over Temperature Protection Yes OVP (Output Tracking/ Fixed Over Voltage Protection Selectable) Yes Thermal decrease of charger output power Yes Thermostatically Controlled Variable Speed Fan (0 - full speed) Yes Approvals CE EN 60335 EN 55014 EN 62233 Charge Cycle, Protection Indication Ves Enterperature sensor in battery clamp Yes Plastic housing w/Mounting flange Yes Plastic housing w/Mounting flange Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes Yes Image: Second Se	Short Circuit Protection	Yes				
Over Temperature Protection Yes OVP (Output Tracking/ Fixed Over Voltage Protection Selectable) Yes Thermal decrease of charger output power Yes Thermostatically Controlled Variable Speed Fan (0 - full speed) Yes Approvals CE EN 60335 EN 55014 EN 62233 Charge Cycle, Protection Indication Ves Enterperature sensor in battery clamp Yes Build in temperature sensor in battery clamp Yes Yes Enterperature Plastic housing w/Mounting flange Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes Yes Yes	Overload Protection	Yes				
OVP (Output Tracking/ Fixed Over Voltage Protection Selectable) Yes Thermal decrease of charger output power Yes Thermostatically Controlled Variable Speed Fan (0 - full speed) Yes Approvals CE EN 60335 EN 55014 EN 62233 Charge Cycle, Protection Indication Ves Encode of the sensor in battery clamp Yes Build in temperature sensor in battery clamp Yes Yes Encode of the sensor Plastic housing w/Mounting flange Yes Yes Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. Yes Weight 2kg 4.4lbs. Yes Yes	Reverse Polarity Protection (by Mosfet))	Yes				
Thermal decrease of charger output powerYesThermostatically Controlled Variable Speed Fan (0 - full speed)YesApprovalsCECharge Cycle, Protection IndicationLCD Graphic each Charging Stage and Protection StatusYesBuild in temperature sensor in battery clampYesPlastic housing w/Mounting flangeYesDimension (WxHxD)220x80x140mmWeight2kgAccessories (Charging Cable with Battery Clamp)Yes		Yes				
Thermostatically Controlled Variable Speed Fan (0 - full speed) Yes Approvals CE EN 60335 EN 55014 EN 62233 Charge Cycle, Protection Indication End 2000 End 2000 End 2000 LCD Graphic each Charging Stage and Protection Status Yes Yes Build in temperature sensor in battery clamp Yes Yes Plastic housing w/Mounting flange Yes Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. Weight 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes		Yes				
ApprovalsCEEN 60335EN 55014EN 62233Charge Cycle, Protection IndicationLCD Graphic each Charging Stage and Protection StatusYesBuild in temperature sensor in battery clampYesPlastic housing w/Mounting flangeYesDimension (WxHxD)220x80x140mm8.7x3.2x5.5inch.Weight2kg4.4lbs.Accessories (Charging Cable with Battery Clamp)Yes	– • • •	Yes				
Charge Cycle, Protection Indication LCD Graphic each Charging Stage and Protection Status Yes Build in temperature sensor in battery clamp Yes Plastic housing w/Mounting flange Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. Weight 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes	Thermostatically Controlled Variable Speed Fan (0 - full speed)					
LCD Graphic each Charging Stage and Protection Status Yes Build in temperature sensor in battery clamp Yes Plastic housing w/Mounting flange Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. Weight 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes	Approvals	CE EN 6033	5 EN 55014	EN 62233		
Build in temperature sensor in battery clamp Yes Plastic housing w/Mounting flange Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. Weight 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes	Charge Cycle, Protection Indication					
Plastic housing w/Mounting flange Yes Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. Weight 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes	LCD Graphic each Charging Stage and Protection Status	Yes				
Dimension (WxHxD) 220x80x140mm 8.7x3.2x5.5inch. Weight 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes	Build in temperature sensor in battery clamp	Yes				
Weight 2kg 4.4lbs. Accessories (Charging Cable with Battery Clamp) Yes	Plastic housing w/Mounting flange	Yes				
Accessories (Charging Cable with Battery Clamp) Yes	Dimension (WxHxD)					
	Weight	5				
Personmended Pottery Conscity Penge	Accessories (Charging Cable with Battery Clamp)	Yes				
	Recommended Battery Capacity Range	20AH to 250AH 10AH to 125AH				

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1 Mpa. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE