

## SMPS-123 / 125 / 243 / 245 BATTERY CHARGERS

### DESCRIPTION

DATAKOM SMPS series are fixed output voltage, current limited lead acid battery chargers specially designed for permanent connection to genset starter batteries.

They maintain the batteries fully charged, without overcharging or gassing. Thanks to their continuous DC outputs they may also be used in a wide range of industrial applications where DC power is required.

When the battery voltage is below the float charge level, the charger provides constant current, nearly equal to the rated output current allowing a rapid recovery of the missing charge. When the battery voltage reaches the float level, the charger switches to constant voltage charge mode and maintains the battery fully charged, providing the maximum battery life.

The chargers are designed in switchmode technology. Their rugged design allows surviving in harsh electromagnetic environments found in automotive industry.

The unit has overload and short circuit protections. This feature makes the units deliver only the rated current during engine cranking or a short circuit condition. They do not need disconnection during cranking.

The high temperature protection of the unit reduces the output current in case of overheating.

The low weight of the unit makes it ideal for use in highly vibrating generator control panels. The small dimensions allow compact panel design.

Thanks to their high efficiency, the self-heating of the chargers is kept in minimum levels allowing operation in warm environments.

The chargers are able to operate in parallel with the engine's charge alternator and other battery chargers. Multiple units may be connected in parallel in order to obtain higher current ratings.

The wide input voltage range allows the chargers to be used in most countries.

The rectifier fail output is provided as a standard feature. This is a semiconductor output pulling to battery negative when the unit is not operating. Thanks to this output, a rectifier fail signal is provided for the genset control module which will give an alarm in case of failure.



The units provide a "boost charge" input as a standard feature. When this input is pulled to battery negative, the output voltage of the charger will be set to the boost charge voltage. This feature may be used temporarily to improve battery life.

The chargers have open chassis, metal cased design, suitable for bolt and stud mounting in an enclosed panel.

The electrical connection is made through a plug-in connection system for easy replacement.

### FEATURES

- 100 KHz switchmode architecture
- Float charging system
- Constant voltage output
- Current limited
- Rugged design for industrial environments
- Wide operating voltage range
- Rectifier fail output
- Boost charge input
- Short circuit protection
- Overload protection
- High temperature protection
- Plug-in connection system

## TECHNICAL SPECIFICATIONS

	Unit	SMPS-123	SMPS-125	SMPS-243	SMPS-245
Technology	-	Switchmode (flyback) 100KHz			
Output Voltage	Volt-DC	13.7	13.7	27.4	27.4
Output Current	Ampere	3	5	3	5
Input Voltage Range	Volt-AC	170-270	170-270	170-270	170-270
Input Frequency Range	Hertz	45-65	45-65	45-65	45-65
Operating Temp. Range	°C	-20 / +70	-20 / +70	-20 / +70	-20 / +70
Storage Temp. Range	°C	-40 / +80	-40 / +80	-40 / +80	-40 / +80
Max. Relative Humidity (non-condensing)	%	95	95	95	95
Max. Input Power	Watt	45	73	85	145
Efficiency (at full load)	%	85	85	86	86
Output Noise (Vpp)	Volt	0.2	0.2	0.2	0.2
Rectifier Fail Output	-	Yes	Yes	Yes	Yes
Rectifier Fail Output Impedance	ohm	270	270	270	270
Boost Charge Input	-	Yes	Yes	Yes	Yes
Boost Charge Voltage	Volt	15.0	15.0	30.0	30.0
High Temp. Protection	-	Yes	Yes	Yes	Yes
Short Circuit Protection	-	Yes	Yes	Yes	Yes
Electrical Connections	-	2 Part plug-in connectors			
Width	mm	90	90	90	90
Height	mm	115	115	115	115
Depth	mm	62	62	62	62
Weight (approx.)	gram	260	260	270	270

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