

Enclosed SM135 12/24 Automatic Battery Chargers

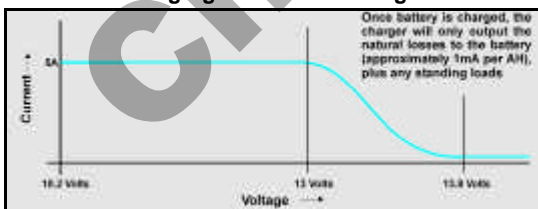


Description

The SM135 is a highly efficient high performance charger. The very smooth output is configured for accurate fast charging and optimum battery life and reliability. The charger is designed to cater for continuous float charging and standby battery applications. Due to its very smooth output (< 1% ripple) the charger is suitable for sealed or vented batteries. The wide input voltage range, from 95-277VAC allows the charger to be used with all common single phase voltages with no adjustment

The SM135 charger is capable of being set up to provide 4 different charge voltage settings (2 nominal 12VDC and 2 nominal 24VDC) each with an adjustable boost setting. Boost is set by 4 voltage pots. The output voltage is set via a jumper placed across the appropriate pin header. Switch mode technology is a major advance in power supply and battery charger design. Giving low heat dissipation and compact low weight design. Utilising the benefits of switch mode, the charger will give a constant current output up to its knee point (13 Volts on a 12 Volt LA) and then ramp down to its float voltage (see graph below).

Charging current vs voltage



Boost mode

A 'boost' mode of operation provides increased voltage output. Selection of boost mode is by shorting the Bst terminal to ground (- Neg output)

Charge fail

By connecting between C/F and - (neg) a charge fail indication can be sensed.

Output Inhibit

The output inhibit value (adjustable via R42) shuts the charger off should the battery voltage be below the set value (normally 62% of nominal battery voltage)

- High rate duty float charging: 4.5A @ 12V,DC or 24V,DC
- User selectable output voltages 12 / 24V for Lead Acid / NiCad
- Fully automatic charge regulation
- Stainless steel enclosure with ammeter indication
- Boost mode
- Charge fail relay output

Product Specification

Power Supply:

nominal operating voltages	95-277VAC
nominal operating frequency	47-440Hz

DC Charge Output:

output current ADC	4.5
nominal voltage VDC	13 - 32V (fully adjustable)
line regulation	< 1%
load regulation	< 1%
output ripple	< 1%
float / boost voltages	see table overleaf

Charge Fail Output:

relay type	volt free SPDT contacts relay de-energised on fault
contact rating	1A @ 30VDC (resistive load)

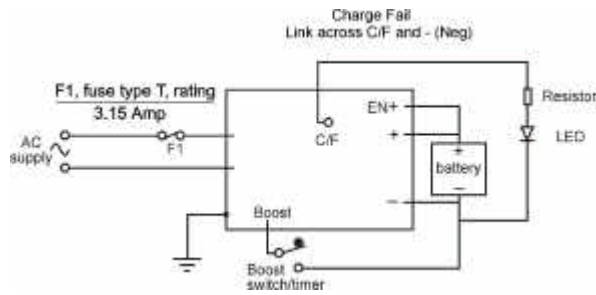
General:

operating temperature	-10 to +55°C
overall dimensions (w x h x d)	140mm x 270mm x 115mm (5.5" x 10.6" x 4.5")
weight	1.2Kg (2.6lbs)
EMC emission / immunity	EN 58801-2 / EN50082-2

Warranty

A one year limited warranty on materials and workmanship is given with this product. Details are available upon request.

Electrical connection



Notes:

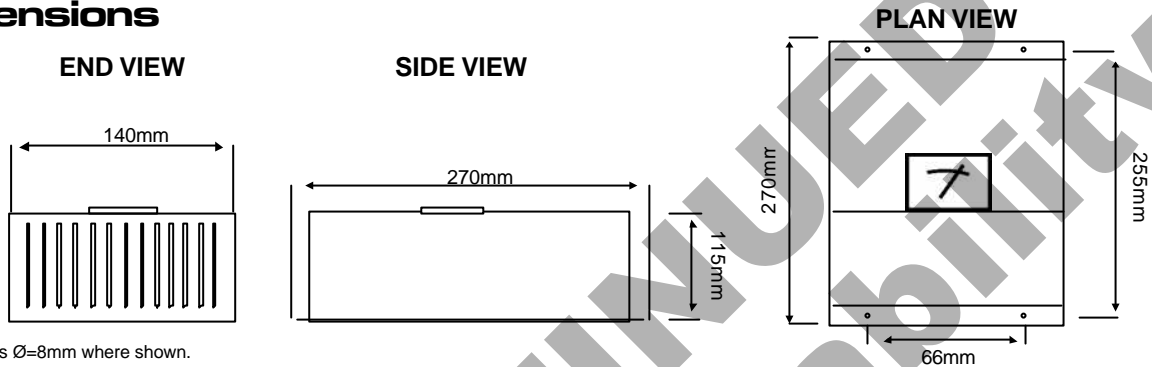
- 1) battery output is isolated from chassis
- 2) chassis must be connected to a low impedance earth

Calibration

Battery type	float volts (VDC)	boost volts (VDC)
12V	Lead Acid (6 cells)	13.7
	Ni-Cd (10 cells)	14.2
24V	Lead Acid (12 Cells)	27.2
	Ni-Cd (20 Cells)	28.4

The above are factory standard settings, specials are available on request.

Dimensions



Fixing holes $\varnothing=8\text{mm}$ where shown.

How to order

When ordering, please specify:-

PRODUCT	Nominal Output VDC	Nominal Output Current
ESM1351224	12/24	4.5

INPUT VOLTAGE	
CODE	95-277VAC
CD	

	FLOAT VOLTAGE SETTINGS (if different from std)			
	12V Setting L/A	12V Setting Ni Cd	24V Setting L/A	24V Setting Ni Cd
	13 - 16VDC		24 - 32VDC	
12VLA	•			
12VNI		•		
24VLA			•	
24VNI				•

Product **Input volts**

Float voltage settings

The above 2 gpart number codes must be filled in to complete your order

Insert settings and options when required, if no options are required, leave empty.

ESM1351224

/CD

12VLA

The above example shows the order code for an enclosed 95-277V, AC input, 12V@4.5A, DC output charger, calibrated for a lead acid battery.

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