

SM50A Auto 3 Stage Range of Automatic Battery Chargers



- **High rate duty float charging:**
3A @ 12V - 1.5A @ 24V - 0.75A @ 48V
- **Fully automatic charge regulation**
- **Light compact design**
- **Universal input voltage**
95VAC - 277VAC @ 47-400Hz
- **Current Limited**
- **Auto 3 stage charging**

Description

The SM50 is a highly efficient high performance charger. The very smooth output is configured for accurate fast charging, optimum battery life and reliability. Due to its very smooth output (< 1% ripple) the charger is suitable for sealed or vented batteries. e.g. Lead Acid sealed (VRLA),

Auto 3 Stage Operation

The output current of the charger is limited to a low value until the battery reaches a specific voltage, preventing high charge current if a cell is shorted. Above this level the bulk charge phase starts supplying maximum current to the battery. This is indicated by the yellow "bulk" LED. This continues until the bulk voltage is reached when the current will start to fall. When it has fallen to 10% of the maximum bulk current the float phase will begin, indicated by the green "float" LED.

Operation Overview

The battery charger is designed so that it can be permanently switched on when connected to the battery provided there are no standing loads present. (If a standing load is required please contact our technical department if this facility is required)

Product Specification

Power Supply:

nominal operating voltages	95-277VAC
nominal operating frequency	47 - 400Hz

DC Charge Output:

output current ADC	3	1.5	0.75
nominal voltage VDC	12	24	48
line regulation	< 1%		
load regulation	< 1%		
output ripple	< 1%		
float / bulk voltages	see table overleaf		

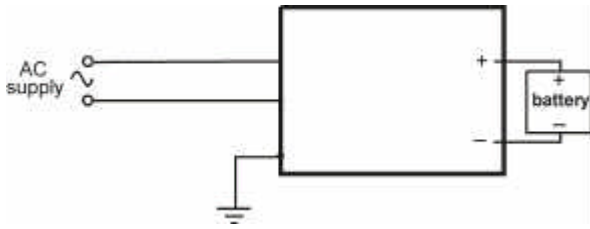
General:

operating temperature	-10 to +55°C
overall dimensions (w x h x d)	80mm x 48mm x 95mm (3.1" x 1.9" x 3.7")
weight	250g (0.55lbs)
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

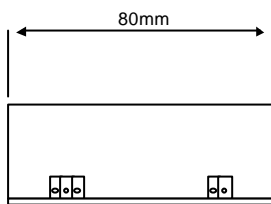
Calibration

Battery type		float volts (VDC)	bulk volts (VDC)
12V	Lead Acid (6 cells)	13.6	14.1
24V	Lead Acid (12 Cells)	27.2	30.0

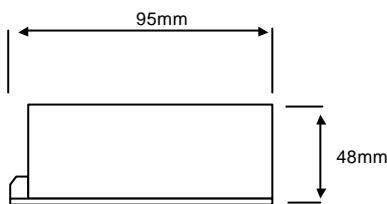
The above are factory standard settings, specials are available on request.

Dimensions

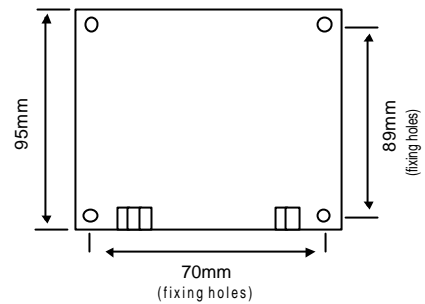
END VIEW



SIDE VIEW



PLAN VIEW



Fixing holes $\varnothing=3\text{mm}$

How to order

When ordering, please specify:-

PRODUCT	Nominal Output VDC			Nominal Output Current		
	12	24	48	3	1.5	0.75
SM50A123	•			•		
SM50A241.5		•			•	
SM50A480.75			•			•

INPUT VOLTAGE	
CODE	95-277VAC
CD	•

BATTERY TYPE	
Lead Acid	VRLA
LA	•
VRLA	•

Product	Input volts	Battery type
SM50A123	CD	VRLA

The above 3 part number codes must be filled in to complete your order

SM50A123 CD VRLA

The above example shows the order code for a 95-277V, AC input, 12V@3A, DC output auto 3 stage charger, calibrated for a VRLA battery.

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