

SM50 Switch mode Range of Automatic Battery Chargers



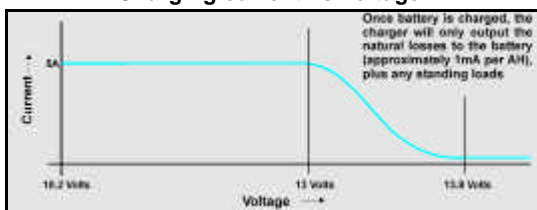
- **High rate duty float charging:**
3A @ 12V - 1.5A @ 24V - 0.75A @ 48V
- **Fully automatic charge regulation**
- **Light compact design**
- **Universal input voltage**
95VAC - 277VAC @ 47-400Hz
- **Current limited**

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. 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. e.g. Nickel Cadmium (NiCd), Lead Acid sealed (VRLA), vented and plante cells.

Switch mode technology is a major advance in power supply and battery charger design. Giving low heat dissipation and a 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). This gives an optimum charge time to ensure that the battery voltage is maintained at the pre-calibrated float level, whilst supplying any additional standing load current up to a specified maximum.

Charging current vs voltage



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 voltages | see table overleaf | | |

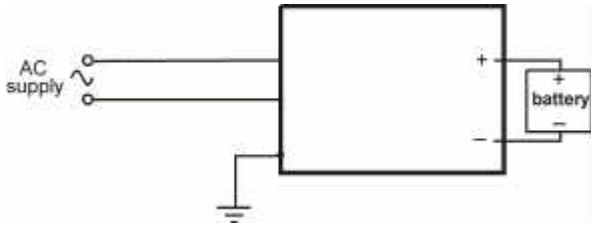
General:

| | |
|--------------------------------|--|
| 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

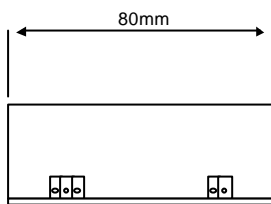
Calibration

| Battery type | | float volts (VDC) |
|--------------|----------------------|-------------------|
| 12V | Lead Acid (6 cells) | 13.6 |
| 24V | Lead Acid (12 Cells) | 27.2 |

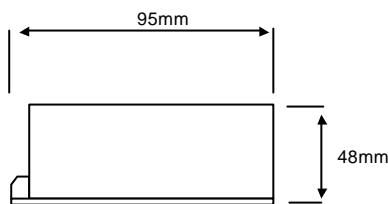
The above are factory standard settings, specials are available on request.

Dimensions

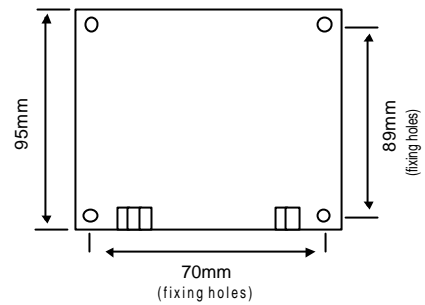
END VIEW



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 |
| SM50123 | • | | | • | | |
| SM50241.5 | | • | | | • | |
| SM50480.75 | | | • | | | • |

| INPUT VOLTAGE | |
|---------------|-----------|
| CODE | 95-277VAC |
| CD | • |

| BATTERY TYPE | |
|--------------|------|
| Lead Acid | VRLA |
| LA | • |
| VRLA | • |

| Product | Input volts | Battery type |
|---------|-------------|--------------|
| SM50123 | CD | VRLA |

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

SM50123 CD VRLA

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

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