

SW6 NiMH/NiCd Charger Automatic Battery Chargers



Description

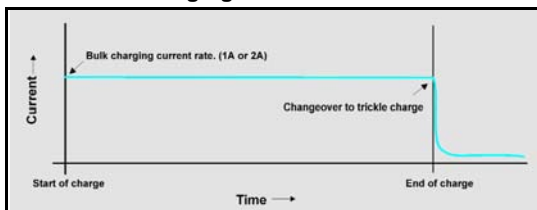
The SW6 is a highly efficient high performance charger with a most versatile performance which utilises switchmode technology that provides low heat dissipation and a compact low weight design.

Due to its very smooth output (< 1% ripple) the charger is suitable for all types of sealed NiCd and NiMH batteries. The charger provides a controlled current output whilst monitoring the cell voltage and cell temperature. The number of cells being charged is selectable via a 6 position switch (see overleaf for standard switch calibration). When the charged voltage is reached the charger switches from it's high current bulk charging mode to a low current trickle charge, full indication is provided of charging state by LED indication. If a standing load is present and the cell voltage drops below 1.41Vpc the high rate bulk charge stage will be automatically initiated.

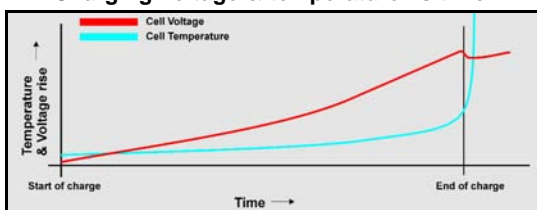
Cell Temperature Protection

The unit features a thermal protection circuit which allows monitoring of the cell temperature. If the cells rise to above 45C the charger switches to it's low current trickle charge. This gives added protection to cell life and performance by, (a) preventing full bulk current charging if batteries have been used in a high rate discharge situation, and the cell temperature had increased above the maximum charging temperature of 45C, or (b) prevent thermal runaway if a shorted cell is present which would under normal conditions mean the pack would never reach final charged voltage and the charger would continuously supply maximum bulk current.

Charging current vs time



Charging voltage & temperature vs time



- **6 different nominal voltages**
For use with 5-25 cell packs
- **Fully automatic charge regulation**
- **Free standing desk top design**
- **Switchable input voltage**
110-120VAC and 220-240VAC
- **Charging indication**
- **Cell temperature monitoring**

Product Specification

Power Supply:

nominal operating voltages	110-120VAC and 220-240VAC (switchable)
nominal operating frequency	50-60Hz

DC Charge Output:

output current ADC	switchable 1A or 2A
nominal voltage VDC	nominal 5VDC - 30VDC
line regulation	< 1%
load regulation	< 1%
output ripple	< 1%
charging settings	see table overleaf

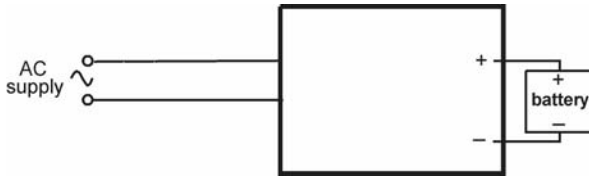
General:

operating temperature	-10 to +55°C
overall dimensions (w x h x d)	108mm x 90mm x 180mm (4.25" x 3.5" x 7.1")
weight	1.6g (3.52lbs)
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:

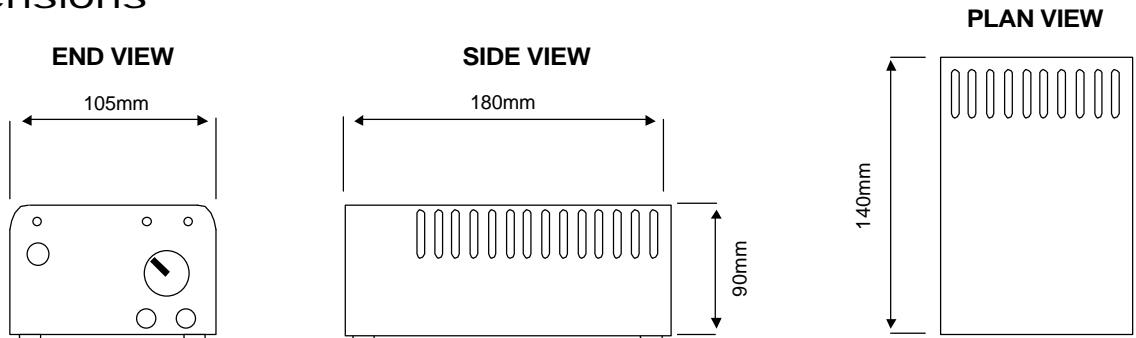
Check supply voltage and set switch at rear accordingly. There are two ranges : 110-120VAC and 220-240VAC)
WARNING: Applying a 220-240VAC input to a unit set in the 110-120VAC range can damage to unit.

Calibration

Switch Position	No. of Cells	Nom VDC	Float Voltage VDC	Charged Voltage VDC
1	5	6	7.05	7.38
2	6	7.2	8.46	8.85
3	10	12	14.10	14.75
4	18	21.6	25.38	26.55
5	20	24	28.20	29.50
6	25	30	35.25	36.88

The above are factory standard settings, specials are available on request. Only specified type of batteries should be charged with this unit, charging other types of batteries may cause damage and result in serious personal injury.

Dimensions



How to order

When ordering, please specify:-

PRODUCT	Number of Cells in Pack						Nominal Output Current (ADC)	
	5	6	10	18	20	25	1	2
SW-NI-6	•	•	•	•	•	•	•	•

INPUT VOLTAGE	
CODE	110-120 / 220-240
EF*	•

* The unit has a slide switch between the two voltage ranges.

BATTERY TYPE	
Suitable only for NiCD and NiMH type rechargeables	
NI	•

Product	Input volts	Battery type
SW-NI-6	EF	NI

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

SW-NI-6 EF NI

The above example shows the order code for a desk top charger, switchable between 110-120VAC and 220-240VAC input, with a switchable output between 5 cell and 25 cell NiCD or NiMH battery pack.

CURRENT POSITION	CELL / AH Cap	TIME OF CHARGE
1	AAA (700mA)	3-4 hour fast charge
	AA (2AH)	3-4 hour fast charge
	C (4AH)	5-6 hour medium charge
	D (8AH)	10 hour standard charge
	F (13.5AH)	10 hour standard charge
2	C (4AH)	3-4 hour fast charge
	D (8AH)	3-4 hour fast charge
	F (13.5AH)	5-6 hour medium charge
	18AH	10 hour standard charge
	20AH	10 hour standard charge

The above shows expected charging times in accordance with selected charge rate. The charge rate is switchable via a 2 position switch on the front of the unit.

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