

OptiMATE⁵ voltmatic

**Fully automatic
6V/12V battery
care for medium
to large batteries**



Desulphates and saves 6V and 12V batteries

Automatic 6V/12V selection

Safe long-term maintenance cycle

Optimises battery power and life

OptiMate[™]5 voltmatic, the ideal tool with automatic selection for 6V - 12V battery care at home. First charger with multi-stage desulphation recovery for 6V batteries.

OptiMate[™]5 voltmatic retains all the fully automatic, 100% safe, easy-to-use characteristics, of the 2 million OptiMates produced since 1995, but with maximum charge current of 2.8 Amp (12 Volt) and 4 Amp (6V) to take care of medium to large batteries.

Forgot your battery throughout the winter? **OptiMate[™]5 voltmatic** is the first ever charger capable of automatically recovering 6V lead-acid batteries from deep discharge (low voltage 12V batteries need confirmation from the user that it is a 12V battery). Then the recovered 6 or 12V battery is optimally recharge, tested and then safely maintained for months at a time. The unique OptiMate long term maintenance charge method not only keeps the battery at 100% without ever over-charging, it also has been proven to prolong battery life by up to 400%. Reducing waste, for a better environment. No wonder 10 major constructors recommend OptiMate. **OptiMate[™]5 voltmatic. Battery performance guaranteed !**

- 1 Low Volt Start (1V)
- 2 TEST before charge
- 3 Turbo SAVE
- 4 Pulse SAVE
- 5 Controlled CHARGE
- 6 OPTIMIZE
- 7 TEST after CHARGE
- 8 OptiMate maintenance

OptiMATE 5

voltmatic

How it works

- 1. Safety check:** OptiMate 5 must be connected to a battery retaining minimum 1V to activate its output. It measures the battery voltage and selects 6 or 12V charge mode. NOTE: A low voltage 12V battery OptiMate 5 proceeds in the 6V program, but will during the program warn the user (flashing red TEST/ ERROR led) the battery should be verified.
- 2. SAVE: Desulphation and recovery:** if due to sulphation the battery's resistance is abnormally high and the voltage very low, for a 6V battery the program automatically proceeds to the 3 stage desulphation program.
As a safety precaution for a low voltage, sulphated 12V battery the user must confirm it is a 12V battery (by disconnecting the charger from AC power, connecting the clips together and reconnecting to AC power). The charge program will preselect 12V mode and the sulphated low voltage 12V can be recovered. Once charging has been completed the program once again reverts to VOLTMATIC mode.
For a 6 or 12V battery, depending on the level of sulphation detected by the program, a higher voltage may be applied to overcome the charge resistance, then it proceeds to a controlled pulse charge program for up to 2 hours until the battery recovers and accepts charge.
- 3. CHARGE: Bulk charge:** Current is increased according to battery charge acceptance, up to a maximum of 2.8A (for a 12V battery) or 4A (for a 6V battery), to efficiently bring the battery close to full charge. As soon as the voltage has reached 7.15V (for 6V batteries) / 14.3V (for 12V batteries) charging is completed during the next step.
- 4. CHARGE: Pulse absorption, cell equalisation (balancing) and charge verification:** Charging is delivered in controlled pulses that automatically equalise cell voltages, until the current has reduced below 400mA which is indicative of a battery that has reached full charge.
- 5. Charge retention test:** During 30 minutes of no charging a check for battery (and connected system) power leakage commences. If the voltage remains above 12.4V during 30 minutes, an "OK" (green LED) lights. These 30 minute test periods repeat hourly until the OptiMate 5 is disconnected, during which battery status indication is updated.
- 6. Charge maintenance:** during alternate 30 minute periods the battery is offered charge current (up to the maximum) it needs to sustain it against any small connected loads or power leakage and against natural self-discharge, at a float limit of 6.8V (for 6V batteries) / 13.6V (for 12V batteries) OptiMate 5 can stay connected to the battery indefinitely, the battery will stay cool and safe. And optimally charged.

Technical Specifications

Ideal for 12V lead-acid batteries	8 to 120Ah, AGM (MF), Standard, GEL and AGM spiral cell
Program control	Microprocessor (9 stages)
Output current (bulk charge)	2.8A (12V) / 4.0A (6V)
Automatic desulphation	3 stage (low voltage 12V battery needs user confirmation)
Charge time limit	72 hours (maintenance time: unlimited)
Maintain / test cycles	30 min/30 min (alternating hourly)
Charge retention test	monitors during 30min., no charge intervals
Size	167 x 65 x 46 mm / 6 1/2 x 2 1/2 x 1 3/4 inches
Weight (packaging)	0.6 kg / 1 1/3 lb
Enclosure classification	fully sealed (IP54), 4 x wall mount tabs
Input cable length	2m / 6ft
Output cable length	2m / 6ft
Included Accessories	O1 fused eyelet set, weather protected O4 clamps set for bench charging
Operation temperature range	-20°C <-> 40°C / -4°F <-> 104°F
Warranty	3 years
AC supply	100-240V 50-60Hz 0.90A @ 100-240V
Reverse drain current	less than 0,5mA
Power usage (no battery connected)	0.0089kWh / day
Ratings / approvals : Safety, EMC, Energy efficiency, enclosure seal rating	IP54, CE, NRTL (UL & CSA), SAA (AU & NZ), approved by TUV Sud. BC (California Energy Compliant).