

**Cat # K3010 Powermaster ® 12V 1.2AH Sealed Lead Acid Battery**

## Features

- Multi-cell design for economy of installation and maintenance
- Individual valve for each cell
- High quality ABS case and cover
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance
- Not restricted for air transport
- Not restricted for surface transport
- Long life
- Float/cycle use
- Low self-discharge rate
- Use in any position



## Specifications

**Nominal Voltage (V)**.....12 volts (6 cells in series)

### Nominal Capacity (AH)

20 hour rate F.V. (1.75V/cell) (350mA to 10.5 volts).....1.2A.H.  
 10 hour rate F.V. (1.75V/cell) (644mA to 10.5 volts).....1.1A.H.  
 5 hour rate F.V. (1.75V/cell) (1190mA to 10.2 volts).....1.0A.H.  
 1 hour rate F.V. (1.75V/cell) (4200mA to 9.60 volts).....0.7A.H.

**Weight (Grams)**.....560g (approx)

**Terminal**.....Type ST1

**Internal Resistance (fully charged battery)**.....<100mΩ

**Maximum discharge current for 5 seconds (A)**.....18A

**Maximum charge current (A)**.....0.36A

### Ambient temperature

Charge.....0°C~+40°C  
 Discharge.....-20°C~+50°C  
 Storage.....-20°C~+50°C

**Vibration Test** (2000 cycles/minute, 2.5mm excursion, 2 hours).....No loss in capacity or performance

### Shelf Life (% of nominal capacity at 20°C ±2°C)

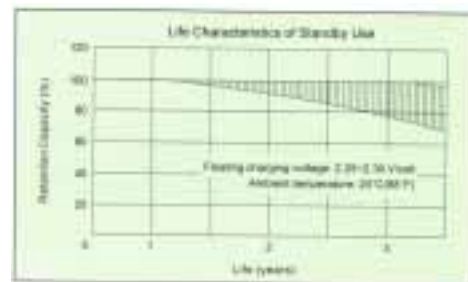
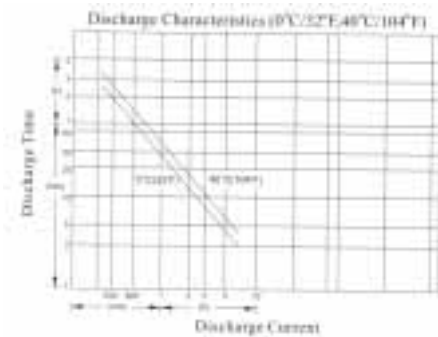
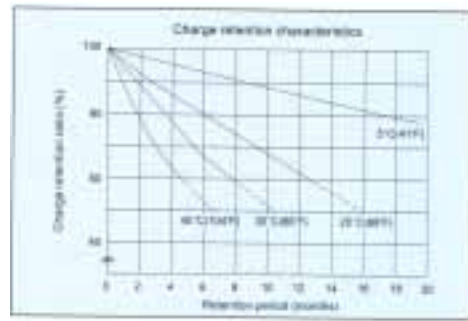
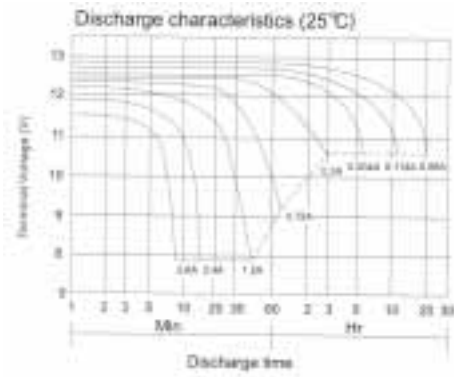
3 months.....93%  
 6 months.....83%

**Case**.....ABS

### Dimensions (mm)

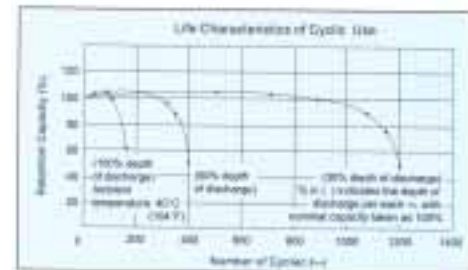
Length ±1mm.....97mm  
 Width ±1mm.....47.5mm  
 Container Height ±1mm.....52mm  
 Total height ±2mm.....58mm

**Application**.....UPS, PABX, Security, Laboratory



**Charging Voltage 20°C**

Charge Method	Voltage Setting	Time	Highest Charging Current	Remarks
Floating	13.65±0.15	18 Hours	Undefined	When used frequently under DC or above 40°C, the voltage must be adjusted to 14.0V/Cell Charging 20°C as reference.
Cycling	14.4±0.1	18 hours	0.35A	When used frequently under DC or above 35°C, the voltage must be adjusted to 14.0V/Cell Charging 20°C as reference.



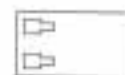
**OUTER DIMENSIONS mm**



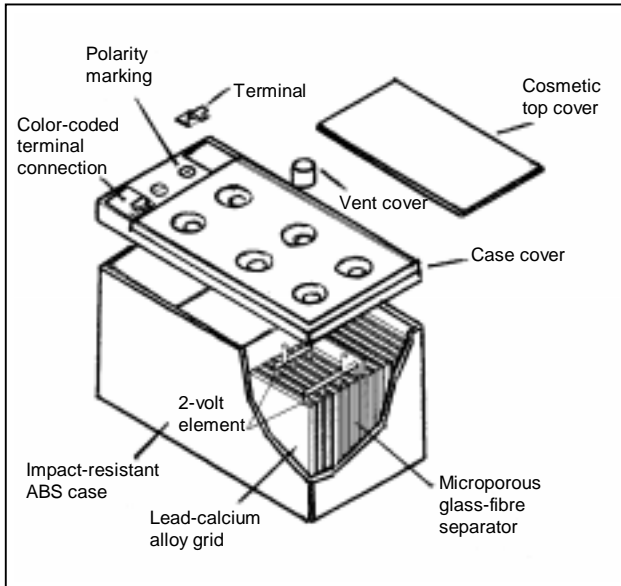
**TERMINAL DIMENSIONS mm**



**TERMINAL POSITION**



# CONSTRUCTION



## Plates (Electrodes)

Plate construction is the key to producing a good battery. Powermaster® sealed lead-acid rechargeable batteries are constructed using the latest technology and equipment to cast grids from a lead-calcium alloy, free of antimony. The small amount of calcium and tin in the grid alloy imparts strength to the plate and guarantees durability even in extensive life-cycle service. Lead oxide paste is added to the grid to form the electrically active material. In the charged state, the negative plate paste is pure lead and the positive plate paste is lead oxide. Both of these are in a porous or spongy form to optimise surface area and thereby maximise capacity.

## Electrolyte

Immobilised dilute sulphuric acid:  $H_2SO_4$ .

## Separators

The plate separators used in Powermaster® sealed lead-acid rechargeable batteries are made of woven glass fibre cloth with high heat and oxidation resistance. This material also offers superior electrolyte absorption and retention and is an excellent ion conductor.

## Relief Valve

In case of excessive gas pressure build-up inside the battery (usually caused by abnormal charging) the relief valve will open and relieve the pressure. The one-way valve not only ensures that no air gets into the battery where the oxygen would react with the plates causing internal discharge, but it also represents an important safety device in the event of excessive overcharge. Vent release pressure is between 2-6 psi. The seal ring material is neoprene rubber.

## Terminals

The AMP quick-connect type terminals are constructed of tin plated brass and sealed with a special epoxy material.

## Container

The ABS housing is resistant to chemicals and flammability.

## Case Sealing

The tongue and groove joint is polyurethane sealed.