



# PowerGuard



## Prevents Flat Batteries

**Merlin  
PowerGuard  
prevents flat  
batteries  
caused by:**

**Vehicle lights left  
on**

**Comms Equipment  
left running**

**Over use of tail or  
passenger lifts**

**CCTV cameras,  
floodlights, pumps,  
AV Equipment +  
Any other  
appliance fitted on  
board**



- Prevents flat batteries
- Automatically shuts off power before battery becomes completely discharged
- Extends the life of your batteries
- Fully programmable for different vehicles

The Merlin **PowerGuard** prevents flat batteries by disconnecting the battery from the electrical system before it is completely discharged. If installed on a cranking battery, this ensures that you can restart the engine. If you have installed the unit on an auxiliary battery you will prevent it from being continually flattened and damaged.

The system's disconnect latching relay draws no power whether it is open or closed. The **PowerGuard** CPU has been specially designed to draw far less power than competitive products while monitoring the state of the battery.

The Merlin **PowerGuard** can be pre-programmed with different isolation voltages for different vehicles. It can also compensate for ambient temperature, ensuring that the unit is not fooled into disconnecting the electrical system unnecessarily.

Once battery shutdown has been activated, re-setting is simple. One press of the dash mount switch will re-connect the battery.



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## Low Voltage Sensing

**PowerGuard** continuously monitors battery condition. If the unit senses that the battery voltage has dropped below its programmed disconnect voltage for longer than four minutes, the unit will isolate the battery. This ensures that there is sufficient power to restart the engine.

## Extends Battery Life

By isolating the battery at the **PowerGuard** voltage threshold, you will significantly extend the life of your battery bank. If you continually flatten batteries, their cyclic life is greatly reduced leading to an expensive replacement program. This is just one of the ways the **PowerGuard** can pay for itself quickly.

## Reduces Vehicle Recovery Costs

How much do roadside breakdowns cost you ? If you are involved with the emergency services, the cost could be even more than you think ! Last year the AA were called out nearly 700,000 times due to flat batteries.

## Added Safety Features

**PowerGuard** has been specially designed so that it cannot isolate while the vehicle is running. There is also a bypass facility so that electrical loads such as hazard warning lights will continue to function. The LED indicator on the dash mount switch will alert the driver when the **PowerGuard** is about to operate and when it has isolated.

MODEL	MBG3/12	MBG3/24
Nominal Operating Voltage	12VDC	24VDC
Current Draw (Standby)	0.19mA	0.095mA
Current Draw (During 4 Minute Timer)	1.5mA	0.75mA
Current Draw (When in Battery Disconnect Mode)	8mA	4mA
Relay Life At Load	Approx 10'000 cycles	
Relay Current Continuous*	100A	100A
Relay Weight	0.5Kg	
CPU Dimensions (LxWxH)	105x72x30 mm	
CPU Weight	0.1Kg	
Isolation Voltage (Programmable)	11.4 - 12.6VDC	22.8-25.2VDC
Isolation Voltage Temperature Compensation	Yes	
Protections	Reverse Polarity, High Voltage Spikes, Isolation While Engine Running	
Approvals	CE, VDE, UL, CSA	
*Relay will handle high cranking current above this level		

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