POWERTECTOR LITHIUM
LOW VOLTAGE DISCONNECT

SOLID STATE BATTERY GUARDS

The PowerTector Battery Guard is a solid state battery device that will monitor the source voltage and disconnect the equipment from the battery if the voltage falls below a pre-determined level. This can work to ensure that there is always sufficient voltage remaining in the battery to start a vehicle engine or ensure power is available for other critical applications. The total discharge of a lithium battery can also cause damage to the cells significantly shortening the life of the battery. The PowerTector unit can also be set to disconnect equipment at a lower voltage that will still protect the battery from total discharge, while allowing for maximum battery usage.

- All PowerTectors from 40A upwards are mounted in a rugged die cast aluminium casing with glass filled polycarbonate cover providing terminal protection and insulation.
- Smaller units; 10A and 20A, are available in a lightweight, polycarbonate casing that can be simply fitted in the wiring, like an inline fuse without the need to drill the vehicle chassis.

A WIDE RANGE OF FEATURES

There are six units in the range from 10A to 200A. The 10A and 20A unit offer a simple in-line system, usually wired to a specific piece of equipment. These units do not require chassis mounting and simply connect and tie wrap neatly within the wiring system.

The 40A and 60A units are connected by M6 brass bolts, the 100A and 200A by M10 brass bolts and use a three point mounting system to avoid rocking or stress to the electronics when mounted on uneven surfaces. Heat is dissipated into our custom manufactured die cast casing and all units will operate at full power without additional heatsink dissipation.

MANUAL SHUTDOWN FACILITY

From 40A upwards, the units have the facility to be manually shutdown either through the ignition or a dedicated switch. In addition, from 100A upwards the units can have an override switch fittted. This allows the units to be reactivated for four minutes to allow emergency actions to be performed.

ALARM & DISCONNECT DELAY FEATURE

An alarm output is provided. Once the threshold has been reached it activates, sounding an alarm or other device for 10 seconds prior to disconnection. (alarm not provided)

LITHIUM VERSIONS

Based on the successful standard PowerTector range for lead acid batteries, these lithium versions are designed to work with LiFePo4 battery voltages including 12.8V and 25.6V. The programming has been revised to include high voltages such that these PowerTectors can be used in conjunction with, or independently of, the battery management system.

FULLY PROGRAMMABLE

All units in the range are supplied pre-programmed for a variety of scenarios offering higher or lower disconnect voltages and it is quick and simple to select the correct programme to suit your needs.

- Using the simple programming terminal, select the pre-set disconnect voltage according to your requirements.
- LED indicates operational status.
- Audible alarm and/or visual indicator can be installed in the dashboard or cockpit to alert operator of a potential problem.
- Switch terminal allows the unit to be operated via the ignition or a manual switch.
- The PowerTector battery guards offer excellent protection for communication and other mission critical applications

CHOOSE YOUR POWERTECTOR PRODUCT

Part Number	Power	Input Voltage	Dimensions	Weight
PT10-L	10A continuous	9Vdc-32Vdc (Automatic Referencing)	155 x 30 x 15mm	45g
PT20-L	20A continuous	9Vdc-32Vdc (Automatic Referencing)	155 x 30 x 15mm	45g
PT40-L	40A continuous	9Vdc-32Vdc (Automatic Referencing)	76 x 78 x 33mm	155g
PT60-L	60A continuous	9Vdc-32Vdc (Automatic Referencing)	76 x 78 x 33mm	155g
PT100-L	100A continuous	9Vdc-32Vdc (Automatic Referencing)	124 x 97 x 51mm	530g
PT200-L	200A continuous	9Vdc-32Vdc (Automatic Referencing)	124 x 97 x 51mm	530g

TECHNICAL DATA

Input voltage range	9-32Vdc (Automatic Referencing)
Output voltage	Equal to input voltage when operating (maximum of 100mV drop across terminals)
Transient over current rating (% of continuous value)	110% for 10s 200% for 1s 300% for <0.5ms On over current shutdown there is a retry every 30s
Quiescent current when shutdown (while running)	Typ 2mA @ 13.6V, (PT40/60 Typ 4mA @ 13.6V), (PT100/200 Typ 6mA @ 13.6V)
Transient voltage protection	Meets ISO7637-2 International standard for 24V vehicles
Electrostatic voltage protection	Meets ISO10605, >8kV contact, 15kV discharge
Operating temperature	-25°C to +60°C to meet this specification table
Storage temperature	-25°C to +100°C
Ingress protection	IP65
Casework	Silver anodised aluminium, glass filled polycarbonate
Connections	PT10/20 Insulated 6.3mm push-on flat blade connectors PT40/60 M6 ring tongues PT100/200 M10 ring tongues 6.3mm push-in flat blade connectors for earth, switch, override and alarm Programming lead with 2.8mm blade connector provided
Output indicator	Green LED for programming and output indication
Mounting method	PT10/20 tie wrap to wiring (supplied) PT40/60/100/200 3off half inch No8 pozi pan head screws (supplied)
Safe area protection: Over current	Limited by current sensing circuit
Over heat	Limited by temperature sensing circuit
Transients	Protected by filters and rugged component selection
Catastrophic protection	Set by external input fuse (set by application demands) and ground line fuse max 1A
Approvals	2014/30/EU The general EMC directive Regulation 10 The automotive directive 93/68/EEC The CE marking directive AES5
Designed to	EN50498, ISO 7637-2
Markings	CE and E (automotive) marked