

PowerTector Series

Low Voltage Disconnect

Solid State Battery Guard

The PowerTector Battery Guard is a solid state 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 lead acid battery can also cause damage to the cells significantly shortening the life of the battery, so 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.

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



All PowerTectors from 40A upwards are mounted in a rugged die cast aluminium casing with glass filled polycarbonate cover providing terminal protection and insulation.

Manual Shutdown Facility

From 40A upwards, the units also offer the facility to fit a switched cable to allow the unit to be connected directly to the ignition or switch. In addition, the 100A and 200A units can have a manual override switch. This ensures that the operator investigates the reason for disconnection prior to resetting the device to allow emergency actions to be performed.

IP65 Protection

All units are protected to IP65, so are fully waterproof, using ultra high performance flexible compound that allows for the natural expansion and contraction of the electronics without the danger of component fracture characteristic of many hard epoxy based resins which can cause long term failure. The extended life offered by this method allows Alfatronix to offer our full lifetime guarantee.



The PowerTector Battery Guards offer excellent protection for communication and other mission critical applications

Fully Programmable

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

A Wide Range and a Multitude of Features

There are six units in the range from 10A to 200A. The 10A and 20A unit offer a simple inline 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 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 heatsinking dissipation.

The terminals are insulated from each other using a solid polycarbonate top assembly that provides physical protection to avoid accidental short circuit or unintentional current bypass and also houses the programming terminal. A multifunction LED provides both programming and status information and a connection is also available to run a wire through to the cockpit or dashboard where visual and audible indicators such as lights and buzzers can be attached to alert the user of a potential problem.



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An ISO9001:2000 Registered Company

Choose your *PowerTector* Product

| Part Number | Power | Input Voltage | Dimensions | Weight |
|-------------|-----------------|------------------------------------|-----------------|--------|
| PT10 | 10A continuous | 9Vdc-32Vdc (Automatic Referencing) | 155 x 30 x 15mm | 45g |
| PT20 | 20A continuous | 9Vdc-32Vdc (Automatic Referencing) | 155 x 30 x 15mm | 45g |
| PT40 | 40A continuous | 9Vdc-32Vdc (Automatic Referencing) | 76 x 78 x 33mm | 155g |
| PT60 | 60A continuous | 9Vdc-32Vdc (Automatic Referencing) | 76 x 78 x 33mm | 155g |
| PT100 | 100A continuous | 9Vdc-32Vdc (Automatic Referencing) | 124 x 97 x 51mm | 530g |
| PT200 | 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 shut down there is a retry every 30s |
| Quiescent current when shutdown (when running) | Typ 2mA @13.6V, (PT40/60 Typ 4mA @13.6V) (PT100/200 Typ 6mA @13.6V) |
| Isolation | >400Vrms between input, output and case |
| Transient voltage protection | Meets ISO7637-2 International standard for 24V vehicles |
| Electrostatic voltage protection | Meets ISO10605, ISO14892, >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 | E coated 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 and switch for additional over ride connection 6.3mm push-in flat blade connectors for earth, program, switch, override and alarm Programming lead provided |
| Output indicator | Green LED adjacent to output terminals (for programming and output indication) |
| Mounting method | PT10/20 tie wrap to wiring PT40/60/100/200 3off pozi screws |
| 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 1A |
| Approvals (pending) | 2004/108/EC The general EMC directive Regulation 10.04 The automotive directive 93/68/EEC The CE marking directive |
| Markings (pending) | CE and E marked |



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