

# 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 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

Enable terminal allows the unit to be operated via the ignition or a manual switch



IP65

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

### 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. In addition a further 5 programmes are available for specific needs.

### 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.

### Manual Shutdown Facility

From 40A upwards, the units also offer the facility to fit an 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.

### 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



AlfaTRONIX

## Power Conversion for Automotive, Communications and Marine Applications

### Choose your PowerTector Product

Part Number	Power	Input Voltage	Dimensions	Weight
PT10	10A continuous	9Vdc-32Vdc (Automatic Referencing)	TBA	TBA
PT20	20A continuous	9Vdc-32Vdc (Automatic Referencing)	TBA	TBA
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	350g
PT200	200A continuous	9Vdc-32Vdc (Automatic Referencing)	124 x 97 x 51mm	350g

### 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, enable and alarm functions 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