

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



IP65

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.

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 line, like an inline fuse without the need to drill the vehicle chassis.

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 fitted. This allows the units to be re-activated for four minutes to allow emergency actions to be performed.

Alarm and Disconnect delay feature

An alarm output is supplied which, once the voltage threshold has been reached for 10 seconds, will activate, sounding an alarm or other indicating device for a further 50 seconds prior to disconnection. This allows the operator to re-start their engine or take other action to maintain continuous power.

Timed Versions

In addition to the standard PowerTectors, the PT-T versions offer a timed facility. This will disconnect the output after a set time after the ignition has been turned off. If required, during this timed period, the voltage can still be monitored and disconnected if it falls below a set level to protect the battery power and system. The unit will re-activate when the ignition has been turned on again and the battery voltage has reached 8.5Vdc (12V systems), 17Vdc (24V systems).



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

40A and 60A units are connected by M6 brass bolts and 100A and 200A by M10 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.

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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)	155 x 30 x 15mm	45g
PT10-T	10A continuous	9Vdc-32Vdc (Auto Ref) Timed	155 x 30 x 15mm	45g
PT20	20A continuous	9Vdc-32Vdc (Automatic Referencing)	155 x 30 x 15mm	45g
PT20-T	20A continuous	9Vdc-32Vdc (Auto Ref) Timed	155 x 30 x 15mm	45g
PT40	40A continuous	9Vdc-32Vdc (Automatic Referencing)	76 x 78 x 33mm	155g
PT40-T	40A continuous	9Vdc-32Vdc (Auto Ref) Timed	76 x 78 x 33mm	155g
PT60	60A continuous	9Vdc-32Vdc (Automatic Referencing)	76 x 78 x 33mm	155g
PT60-T	60A continuous	9Vdc-32Vdc (Auto Ref) Timed	76 x 78 x 33mm	155g
PT100	100A continuous	9Vdc-32Vdc (Automatic Referencing)	124 x 97 x 51mm	530g
PT100-T	100A continuous	9Vdc-32Vdc (Auto Ref) Timed	124 x 97 x 51mm	530g
PT200	200A continuous	9Vdc-32Vdc (Automatic Referencing)	124 x 97 x 51mm	530g
PT200-T	200A continuous	9Vdc-32Vdc (Auto Ref) Timed	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 programming terminal (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	2004/108/EC The general EMC directive AES Spec 5 Regulation 10.04 The automotive directive 93/68/EEC The CE marking directive
Markings	CE and E marked



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