

- PACKING CONTENTS
- 1 x PowerTector
- 6 x Crimp Connectors
- FEATURES
- 12V / 24V Automatic mode selection (12V mode $8 < V \leq 17$, 24V mode $17 < V \leq 35$)
- 10 Programmable voltage settings
- Supplied with FASTON crimp connectors for low current connections
- IP65 rated
- Switch connection for remote on/off
- Override switch connection
- Connection for remote alarm

- OPERATION
- 1. Select a cool and ventilated position to install the device which is not exposed to direct sunlight.
- 2. Mount as close to the battery as possible using a wire of sufficient diameter.
- 3. Isolate the power to the wiring before commencing installation.
- 4. Mount using the three mounting holes with screws or bolts.
- 5. Connect the 'ground' terminal.
- 6. Connect the 'input positive' terminal.
- 7. If required program the unit as described below.
- 8. Connect the 'output positive' once no further programming is required.
- 9. Connect the alarm and switches if required.

The PowerTector will guard against excessive battery discharge by disconnecting the load before the battery voltage drops too low. Ten seconds after the battery voltage drops below the disconnect threshold the alarm output will activate. If the battery voltage is still below the disconnect threshold after a total of 60s the PowerTector will disconnect the load from the battery and deactivate the alarm. The load will remain disconnected until the battery voltage rises above the reconnect threshold. The PowerTector will protect the load by disconnecting it if the battery voltage exceeds 19V on a 12V system or 32V on a 24V system.

■ ASSEMBLY

1. Select a cool and ventilated position to install the device which is not exposed to direct sunlight.
2. Mount as close to the battery as possible using a wire of sufficient diameter.
3. Isolate the power to the wiring before commencing installation.
4. Mount using the three mounting holes with screws or bolts.
5. Connect the 'ground' terminal.
6. Connect the 'input positive' terminal.
7. If required program the unit as described below.
8. Connect the 'output positive' once no further programming is required.
9. Connect the alarm and switches if required.

The Override function can be used to force the PowerTector to reconnect the output for 4 minutes to allow emergency actions to be performed. This will only function if the battery voltage is above 8.5V. To use the Override function, connect the 'Override' terminal to the negative terminal of the battery for 10 seconds and the PowerTector will reconnect the output, now remove the connection between 'Override' terminal and the battery. A momentary action switch is the suggested method for operating the Override function.

PROGRAMMING

■ THE CONNECTIONS

Isolate the circuit before you connect or disconnect the device. Connect the unit as detailed in the wiring diagram.

■ PROGRAMMING

There are 4 settings that can be defined by the user, each setting is in a Program Family, as shown in the table below. Changing the setting within a Program Family does not affect any other Program Family.

Program Family 1: Operating voltage range. P1-P10 (P7 is default).

Program Family 2: Alarm output mode.. P11 (default)—The alarm output will be constantly active 10s after the voltage drops below the disconnect threshold. It will deactivate if the voltage rises above the disconnect threshold or 60s after the voltage drops below the disconnect threshold.

The alarm will activate in pulse mode if the battery voltage rises above 19V for a 12V system or 32V for a 24V system. P12—The alarm output will be constantly active 10s after the voltage drops below the disconnect threshold. It will deactivate if the voltage rises above the reconnect threshold.

The alarm output will not activate if the voltage rises above the over-voltage protection level.

This mode can be used for enabling an external battery charger to replenish the battery that the PowerTector is protecting.

Program Family 3: Switch terminal mode. P13 (default)—The PowerTector output is disconnected when the switch terminal is connected to the negative terminal of the battery.

P14—The PowerTector output is disconnected when the switch terminal is connected to the positive terminal of the battery.

Program Family 4: Voltage range select. P15 (default)—The unit will automatically select the voltage range (12V or 24V) each time power is applied.

P16—The unit will operate as a 12V unit only.

P17—The unit will operate as a 24V unit only.

To change a program:

1. Temporally connect together the 'input positive' and the 'program' terminal using the programming lead supplied.
2. The LED will start to flash, each flash indicates the program to be selected.
3. Keep the connection until the LED has flashed the number of times for the desired program then remove the connection.
4. The LED will then flash the number of times to confirm the selected program.

Alarm** - The use of a relay requires a free wheeling diode to prevent damage - see application note AN-PT01.

SAFETY

■ SAFETY

• **This PowerTector is for ancillary equipment only. It must not be used to disconnect equipment that is critical to the safe operation of the vehicle.**

- The device must not be exposed to severe mechanical shocks.
- The device must not be exposed to extreme temperature, direct sunlight or vigorous vibration.
- The device may only be used within a dry environment, such as a vehicle.
- Do not install this device on hot vehicle parts and ensure there is sufficient space around the device for air circulation and cooling.
- The wiring harness should be protected by fuses.
- Observe the magnitude and polarity of the input/output voltage when installing, incorrect polarity of the output could damage the circuit.
- Isolate the circuit before you connect or remove the device.
- Ensure that the output of the device is not short-circuited.
- Never open the device casing and never repair it. The device must be replaced if it is damaged.

■ INDUCTIVE LOADS

The inductive load rating of this PowerTector is 1mH.

Do not exceed the specified inductive rating.

Inductive equipment includes; motors, pumps, refrigeration, relays, long cables etc. Conducted voltage transients must not exceed those specified by ISO7637-2:2004 Level III.

■ FUSING

The input and ground wiring must be fused appropriately.

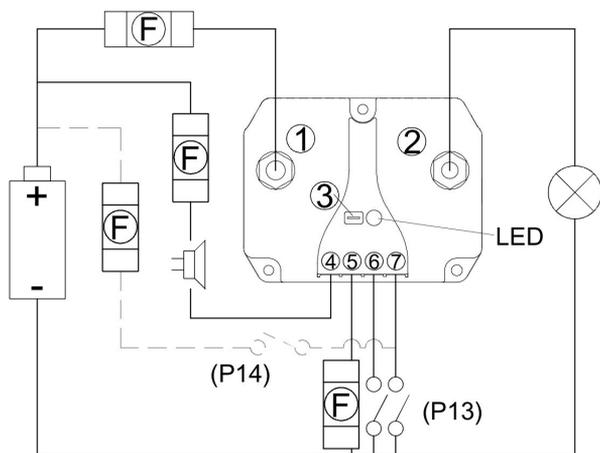
For the ground, minimum 500mA to 1A maximum.

For the alarm, (4) maximum current is 500mA.



This device complies with the EU directive 2004/108/EC. The type plate is located on the top of the device.

WIRING DIAGRAM



- (1) - Input Positive
- (2) - Output Positive
- (3) - Program
- (4) - Alarm**
- (5) - Ground
- (6) - Override
- (7) - Switch
- (F) - Fuses

■ TECHNICAL DATA

Part Number	Current	Rated Voltage	Dimensions	Weight
PT100	100A	12V/24V	124x97x51mm	530g
PT200	200A	12V/24V	124x97x51mm	530g

PROGRAM MODES

■ PROGRAM MODES

Program Family	Program Number	12V		24V	
		Disconnect	Reconnect	Disconnect	Reconnect
Family 1	P1	10.5V	12V	21V	24V
	P2	10V	11.5V	20V	23V
	P3	9.5V	11.5V	19V	23V
	P4	11V	13.5V	22.5V	26.5V
	P5	11.5V	13.5V	23V	27.5V
	P6	10.5V	12.5V	21V	25V
	P7*	11.5V	12.5V	23V	25.5V
	P8	11V	12.5V	23.5V	25.5V
	P9	12V	13V	24V	26V
	P10	10V	13V	20V	26.5V
Family 2	P11*	Alarm Mode = Normal			
	P12	Alarm Mode = Battery Charger Enable			
Family 3	P13*	Switch Mode = Low			
	P14	Switch Mode = High			
Family 4	P15*	Voltage Range = Auto			
	P16	Voltage Range = 12V Only			
	P17	Voltage Range = 24V Only			

* Factory default settings