

# Anti-Zap™ Surge Protection

## PURPOSE

- To protect electronic components in a 12V and 24V vehicle electrical system against transient voltage surges and spikes.

## CAUSES OF TRANSIENT SURGES

- Completing or breaking circuits, for example: Connecting or disconnecting battery leads, installing or removing fuses, jump starting using a jump pack or jump leads from another vehicle.
- Electric welding (Tig, Arc, Mig) on a vehicle without removing the battery

## APPLICATIONS

- Jump starting a 12V/24V vehicle
- Replacing a battery
- All electrical work on a 12V/24V vehicle system
- Any time electrical welding is performed on a vehicle
- Best practice is to install on all vehicles

## TECHNICAL SPECIFICATIONS

- Housing - Heavy duty polycarbonate, sonically welded closed
- Leads - 10mm<sup>2</sup> Pure copper battery cable, 50cm length
- Clamps - Heavy duty fully insulated steel clamps
- Pulse power rating of 1500 watts for 1 millisecond
- Clamping response time: 1 x 10<sup>-9</sup> seconds bidirectional
- Electrical characteristics apply in both directions



## HOW IT WORKS

Transient voltage spikes cause damage as they travel through an electrical system to earth (ground).

A functional Matson Anti-Zap surge protection device, correctly installed between positive and earth, forces the transient spike through the device, effectively clamping the spike before it reaches earth, eliminating any chance of damage to electronics in that circuit. This is performed in such a tiny fraction of a second as to be effectively instantaneous.



V(BR) – Breakdown Voltage. This is the voltage that the Matson Antizap clamps the transient spike to

Description	Part No.	Type	V(BR)	Indication	Application
Service Minder - Permanent	MA224HD	12/24V	26	Green/Red LED	Industrial user. Green LED indicates correct connection. Red LED indicates unit is not operational.
Service Minder - Portable	MA20121224				
Jumper Leads	MASS100AZ	12V	22	Green/Red Bicolor LED	Commercial user. Green LED Indicates unit connected correctly and operational. Red LED indicates unit connected incorrectly.
	MA254AZ MA354AZ MA504AZ MA506AZ MA654AZ	12/24V	26	Green/Amber/Red LED	Industrial user. For 12V systems: Amber LED indicates low battery (0-9V); Green LED indicates unit connected correctly and operational (10+V). For 24V systems: Amber LED indicates low battery (<18V); Green LED indicates (20+V). Red LED indicates unit connected incorrectly.
Jumper Lead Upgrade	MA98304	12/24V	26	Green/Amber/Red LED	Industrial user. For 12V systems: Amber LED indicates low battery (0-9V); Green LED indicates unit connected correctly and operational (10+V). For 24V systems: Amber LED indicates low battery (<18V); Green LED indicates (20+V). Red LED indicates unit connected incorrectly. Max F14.5mm cable.