

APM Alternator Protection Module

BALMAR
DC CHARGING SOLUTIONS

TECHNICAL DATA SHEET

APM Balmar Alternator Protection Module

Protects alternators from damaging voltage spikes caused by:

- Battery disconnects
- Lithium BMS shutdowns
- Intermittent connections
- Starters
- Solenoids
- Motors
- Other over-voltage events

The **APM** installs between the alternator **B+** and **B-** terminals and helps protect the alternator diodes and internal regulator by absorbing high-energy surges, including spikes over 200A. It provides both short-duration and longer-duration surge protection, with visual and audible alerts if replacement is needed.

Suitable for all alternator brands.

Visual and audible alarms indicate if the device has been compromised and needs replacement.

Standard Compliance:

- **ISO 16750-2** – Load Dump Protection
- **ISO 7637-2** – Surge Protection
- **SAE J1171** – Ignition Protection
- **ASTM B117** – Salt Spray Resistance

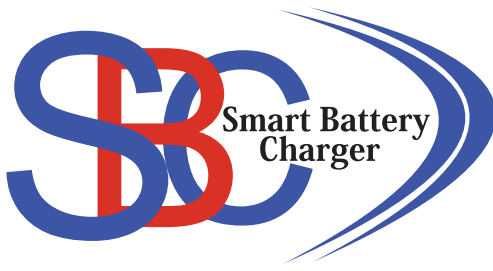
Versions Available:

- **APM-12:** Alternator Protection Module, 12V
- **APM-24:** Alternator Protection Module, 24V
- **APM-48:** Alternator Protection Module, 48V



Green LED:
Protecting

Red LED and/or beep:
Protection failure,
replace APM



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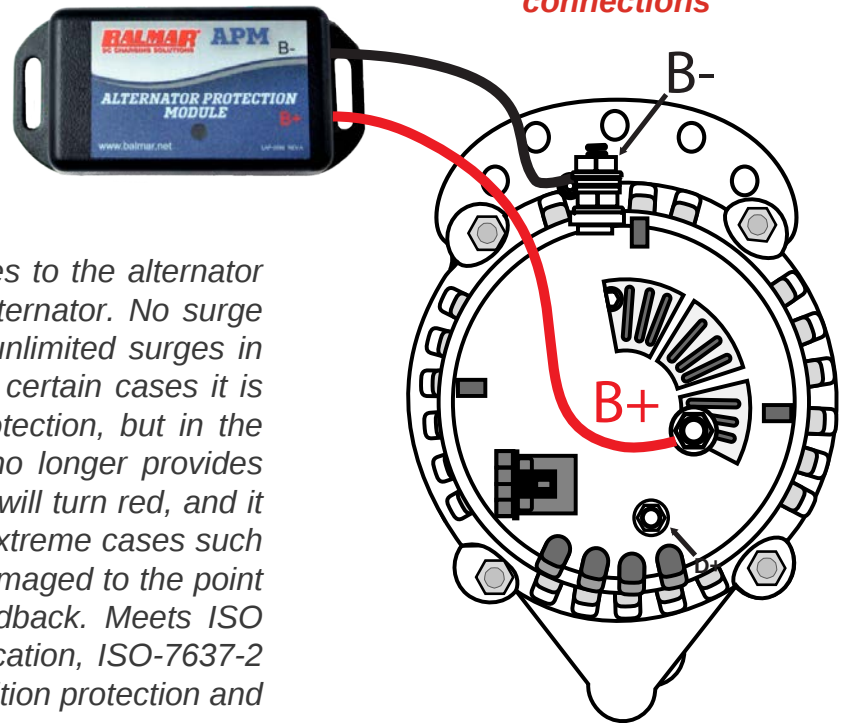
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Installation:

1. Connect the Ring Terminal on the Red Lead to the B+ Post
2. Black Lead:
 - If the alternator is Isolated Ground Connect to B- Post
 - If the Alternator is Case Ground Connect to a Case Mounting Bolt
3. Secure the APM case to a battery cable with the included zip-ties

DO NOT PLACE EITHER CONNECTOR UNDER THE BATTERY CABLE LUGS

Note: If the nuts securing the cables to the alternator loosen, the APM cannot protect the alternator. No surge protection device can protect against unlimited surges in either amplitude, power or duration. In certain cases it is possible that the APM will provide protection, but in the process become damaged so that it no longer provides protection. In this event, the APM LED will turn red, and it will begin to give a chirping sound. In extreme cases such as lightning strikes, the APM can be damaged to the point it no longer functions or provides feedback. Meets ISO 16750-2 for Load-Dump Surge Specification, ISO-7637-2 for Surge Capability, SAE J1171 for ignition protection and ASTM B117 for Salt Spray/Fog.



See Alternator manual for locations of B+ and B- connections

Use the correct module for the application - 12v, 24v or 48v. A mismatch will not provide protection.