

Title (en)

Exciter circuits and methods with protective measures for solid state switches.

Title (de)

Erregerkreise und Methoden mit Schutzmassnahmen für Halbleiterschalter.

Title (fr)

Circuits d'excitation et méthodes comprenant des mesures protectrices pour des commutateurs à l'état solide.

Publication

EP 0589603 A2 19940330 (EN)

Application

EP 93307213 A 19930914

Priority

- US 94931992 A 19920922
- US 99486592 A 19921222

Abstract (en)

An exciter for an internal combustion engine igniter plug (12) comprises a continuous AC charging circuit (20) and a discharge circuit (22). The discharge circuit (22) is connectable to the plug (12) and the charging circuit (20) includes a transformer (T1) having a primary winding connectable to an AC power source (28) and a secondary winding connected to the discharge circuit. The discharge circuit includes a storage capacitor (38) connected to the transformer secondary winding such that current induced in the secondary charges the capacitor (38) at a generally constant rate. A switching device (46) is connected in series between the capacitor (38) and the plug (12). A trigger circuit (52) triggers the switching device (46) in response to charge on the capacitor (38). The charging circuit (20) and trigger circuit (52) operate to maintain a generally constant spark rate. A current multiplier (76) is also provided to substantially increase the peak currents delivered to the plug (12). A clamping diode (150) is also provided in parallel with the storage capacitor (38) to prevent reverse currents and voltages due to resonance between the capacitor (38) and stray inductance. <IMAGE>

IPC 1-7

F02P 15/00; F02P 3/08; F02P 7/03

IPC 8 full level

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CPC (source: EP)

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