

Title (en)

Method and apparatus for supplying high frequency alternating current to a low pressure discharge lamp

Title (de)

Verfahren und Anordnung zum Betreiben einer Nieder-Druck Entladungslampe mit hochfrequentem Wechselstrom

Title (fr)

Méthode et appareil pour alimenter en courant alternatif à haute fréquence une lampe à décharge basse-pressure

Publication

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Application

EP 01660253 A 20011228

Priority

FI 20010016 A 20010105

Abstract (en)

[origin: EP1225791A2] The lamp drive current is passed from the common point (Vin) of the switches (1,2) of a half-bridge inverter to a lamp load circuit formed by an inductor (L) connected in series with the lamp (4) and a DC blocking capacitor (5). A second capacitor (C) is connected in parallel with the series connection of the lamp (4) and the DC blocking capacitor (5). During normal operation of the lamp, the operating frequency of the half-bridge inverter (1,2) is kept with the help of control means (3) at the resonant frequency of the oscillatory circuit formed by inductor (L) and second capacitor (C). The values of inductor (L) and second capacitor (C) are selected so that, at the resonant frequency of the same, there is obtained a desired lamp drive current (nominal operating current of the lamp) at a level which is substantially independent from the resistance (R) of lamp (4). Thus, the ballast circuit operates as a kind of constant-current generator allowing one and a single ballast to be used for a family of lamps with different power ratings. <IMAGE>

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CPC (source: EP)

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Citation (search report)

[X] YIYOUNG SUN: "Improved simulation accuracy and reduced design time for electronic ballast designs which incorporate fixed frequency controller ICs", INDUSTRY APPLICATIONS CONFERENCE, 1996. THIRTY-FIRST IAS ANNUAL MEETING, IAS '96., CONFERENCE RECORD OF THE 1996 IEEE SAN DIEGO, CA, USA 6-10 OCT. 1996, NEW YORK, NY, USA, IEEE, US, 6 October 1996 (1996-10-06), pages 2183 - 2188, XP010201350, ISBN: 0-7803-3544-9

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