Title (en)

Improvements in driving of discharge lamps in particular for vehicle headlamps

Title (de)

Verbesserungen in der Steuerung von Entladungslampen, insbesondere in Fahrzeugscheinwerfern

Title (fr)

Perfectionnements à la commande de l'alimentation de lampes à décharge notamment de projecteurs de véhicule automobile

Publication

EP 1087644 A1 20010328 (FR)

Application

EP 00402459 A 20000906

Priority

FR 9912114 A 19990927

Abstract (en)

The incoming supply is received by a DC/DC converter (1), the input being derived through a switching transistor (Q1) which controls the primary of a transformer (T). The converter output forms the input to a DC/AC converter, supplying the lamp. This converter's bridge rectifier employs transistors switched at frequencies in the range 200-1000 Hz and gives rise to significant electromagnetic interference. The switching of the DC/DC converter transistor is controlled by a regulator (4). By suitably programming the latter, the power delivered to the lamp is modulated in a pseudo-random sequence by a fractional amount, e.g. plus or minus 500 mW on a mean power of 35 W, the resulting frequency spectrum spread substantially reducing the interference, typically by up to 8 dB. Opt., modulation is achieved by the analogue addition of a separately generated power increment/decrement at the output of the DC/DC converter.

Abstract (fr)

Selon le procédé pour la commande d'un dispositif d'alimentation d'une lampe à décharge notamment de projecteur de véhicule automobile, ledit dispositif d'alimentation comportant un convertisseur continu/alternatif, on module dans le temps la puissance d'alimentation fournie audit convertisseur continu/alternatif. La puissance d'alimentation fournie au convertisseur continu/alternatif est modulée selon une séquence pseudo-aléatoire. L'invention concerne également un dispositif d'alimentation qui met en oeuvre ce procédé. <IMAGE>

IPC 1-7

H05B 41/292

IPC 8 full level

H05B 41/24 (2006.01); **H02M 7/537** (2006.01); **H05B 41/16** (2006.01); **H05B 41/292** (2006.01)

CPC (source: EP US)

H05B 41/2928 (2013.01 - EP US)

Citation (search report)

- [XY] EP 0744883 A1 19961127 - PRAEZISA IND ELEKTRONIK [DE]
- [X] EP 0785702 A2 19970723 - OSRAM SYLVANIA INC [US]
- [Y] EP 0291223 A1 19881117 - EMI PLC THORN [GB]
- [Y] EP 0944294 A2 19990922 - MATSUSHITA ELECTRIC IND CO LTD [JP]
- [X] STORMBERG H -P ET AL: "EXCITATION OF ACOUSTIC INSTABILITIES IN DISCHARGE LAMPS WITH PULSEDSUPPLY VOLTAGE", LIGHTING RESEARCH AND TECHNOLOGY,GB,ILLUMINATING ENGINEERING SOCIETY, LONDON, vol. 15, no. 3, 1 March 1983 (1983-03-01), pages 127 - 132, XP002052920, ISSN: 0024-3426

Designated contracting state (EPC)

DE ES GB IT

DOCDB simple family (publication)

EP 1087644 A1 20010328; **EP 1087644 B1 20061102**; DE 60031620 D1 20061214; DE 60031620 T2 20070906; ES 2275478 T3 20070616; FR 2799062 A1 20010330; FR 2799062 B1 20011221; JP 2001157463 A 20010608; JP 4542251 B2 20100908; US 6556463 B1 20030429

DOCDB simple family (application)

EP 00402459 A 20000906; DE 60031620 T 20000906; ES 00402459 T 20000906; FR 9912114 A 19990927; JP 2000292475 A 20000926; US 67071100 A 20000927