

Title (en)

ELECTRONIC BALLAST AND METHOD FOR OPERATING AT LEAST ONE DISCHARGE LAMP

Title (de)

ELEKTRONISCHES VORSCHALTGERÄT UND VERFAHREN ZUM BETREIBEN MINDESTENS EINER ENTLADUNGSLAMPE

Title (fr)

BALLAST ÉLECTRONIQUE ET PROCÉDÉ DE FONCTIONNEMENT D'AU MOINS UNE LAMPE À DÉCHARGE

Publication

EP 2484183 B1 20131225 (DE)

Application

EP 10744908 A 20100812

Priority

- DE 102009043611 A 20090929
- EP 2010061769 W 20100812

Abstract (en)

[origin: WO2011038974A1] The present invention relates to an electronic ballast for operating at least one discharge lamp (RL), comprising an input having a first (E1) and a second input connection (E2) for coupling to a DC supply voltage (UZw); an output having a first (A1) and a second output connection (A2) for coupling to the at least one discharge lamp (RL); an inverter (10) having a bridge circuit with at least one first (S2) and one second electronic switch (S1), and a control device (12) for actuating at least the first (S2) and the second electronic switch (S1) such that the first (S2) and the second electronic switches (S1) are alternately conductively connected with a first frequency (fR), wherein the first (S2) and the second switches (S1) are coupled in series between the first (E1) and the second input connections (E2), wherein the first electronic switch (S2) is coupled to the first input connection (E1) and the second electronic switch (S1) is coupled to the second input connection (E2), wherein a first bridge center point (HBM) is designed between the first (E2) and the second electronic switch (E1); a current measurement device (RS) for measuring the current (IS) at least by the second electronic switch (S1); a lamp choke (LR) that is serially coupled between the first bridge center point (HBM) and the first output connection (A1); at least one trapezoidal capacitor (Ct) that is coupled parallel to one of the two electronic switches (S1; S2); and at least one coupling capacitor (CC) for coupling the load; wherein the control device (12) is coupled to the current measurement device (RS) and designed to switch the second electronic switch (S1) to be conductive a) if a predeterminable negative threshold value (IThres) of the current is exceeded by the second electronic switch (S1) after switching off the first electronic switch (S2); or b) if the predeterminable negative threshold value (IThres) of the current (IS) is not exceeded by the second electronic switch (S1) after turning off the first electronic switch (S2), after a predeterminable period of time (ttimeout); wherein the control device (12) is designed to increase the first frequency (fR) in case b). The invention furthermore relates to a corresponding method for operating a discharge lamp (RL).

IPC 8 full level

H05B 41/282 (2006.01)

CPC (source: EP US)

H05B 41/2828 (2013.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

DE 102009043611 A1 20110407; CN 102577626 A 20120711; CN 102577626 B 20141210; EP 2484183 A1 20120808; EP 2484183 B1 20131225; US 2012181945 A1 20120719; US 8994285 B2 20150331; WO 2011038974 A1 20110407

DOCDB simple family (application)

DE 102009043611 A 20090929; CN 201080043652 A 20100812; EP 10744908 A 20100812; EP 2010061769 W 20100812; US 201013498150 A 20100812