

Title (en)

Electronic starter for fluorescent lamps comprising a time delay circuit cooperating with an overvoltage circuit and a preheating circuit.

Title (de)

Elektronischer Starter für Fluoreszenzlampen, mit einem, mit einem Überspannungsschaltkreis und einem Vorwärmstromkreis zusammenwirkenden Zeitverzögerungsstromkreis.

Title (fr)

Starter électronique pour tube fluorescent, comportant un circuit temporisateur coopérant avec un circuit de surtension et un circuit de préchauffage.

Publication

EP 0063507 A1 19821027 (FR)

Application

EP 82400510 A 19820319

Priority

FR 8106772 A 19810403

Abstract (en)

1. An electronic starter for a fluorescent lamp powered by an a.c. source and consisting of : a. a preheating circuit comprising a series arrangement of at least : (1) the lamp filament ; (2) a switching element activated by means of a gate electrode ; b. a time-delay circuit comprising a series arrangement of at least : (3) a set of resistors constituting a bridge, for the control of the said gate electrode ; c. an overvoltage circuit comprising a series arrangement of at least : (4) an overvoltage capacitor, (5) an inductive element ; characterized in that : d. the switching element is unidirectional and in that the preheating circuit also comprises a series arrangement of : (6) a diode whose conductivity direction is the same as that of the switching element and which is intended to limit the operation of the preheating circuit to the positive half cycles of the supply voltage which correspond to the conduction of said diode, by means of the voltage charge of at least one capacitance in series with a resistor connected to the gate of the switching element ; e. the time-delay circuit also comprises a time-delay capacitor arranged in series with the supply source during the negative half cycles and in parallel with at least a fraction of the resistor bridge for applying a voltage to the gate, which voltage is increasingly negative during the periods when the switching element is non-conducting and thus progressively delays the closure of the switching element during each positive half cycle ; f. the overvoltage circuit is arranged in parallel with the switching element in order that as from the start of the positive half cycles the overvoltage capacitor is charged during the periods having an increasing delay time at the closure of the switching element, after which, at the closure of this element it is discharged across the switching element in the inductive element, which inductive element is the primary winding of an auto-transformer arranged in series in the pre-heating circuit.

Abstract (fr)

Un tel starter électronique (111) comporte notamment un circuit de préchauffage (résistance R8, diode D2, thyristor Th, enroulement secondaire S, élément de protection 5) des filaments (F1) et (F2) du tube (1), et un circuit de surtension (condensateur C2, résistances R6, R7, diode D1, thyristor Th, autotransformateur T1) délivrant une surtension de niveau progressivement croissant pour assurer l'allumage de ce tube; ces deux circuits coopèrent avec un circuit temporisateur (condensateur C1, résistance R5, diode D3), grâce à un organe de commutation unique (Th).

IPC 1-7

H05B 41/04

IPC 8 full level

H05B 41/04 (2006.01)

CPC (source: EP)

H05B 41/046 (2013.01)

Citation (search report)

[X] GB 1411575 A 19751029 - LAMPES SA

Cited by

EP0105042A1; CN1311715C; WO8302871A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

EP 0063507 A1 19821027; EP 0063507 B1 19870128; AT E25316 T1 19870215; DE 3275345 D1 19870305; ES 511049 A0 19830201; ES 8303875 A1 19830201; FR 2503521 A1 19821008; FR 2503521 B1 19840504; MA 19430 A1 19821231; PT 74682 A 19820401; PT 74682 B 19830822

DOCDB simple family (application)

EP 82400510 A 19820319; AT 82400510 T 19820319; DE 3275345 T 19820319; ES 511049 A 19820401; FR 8106772 A 19810403; MA 19634 A 19820401; PT 7468282 A 19820331