Title (en)

Control circuit.

Title (de)

Steuerschaltung.

Title (fr)

Circuit de commande.

Publication

EP 0376493 A1 19900704 (EN)

Application

EP 89312438 A 19891129

Priority

GB 8829902 A 19881222

Abstract (en)

A method of controlling the current flow in the solenoid winding 13 of an electromagnetic actuator in which the current flowing in the winding is controlled by a pair of switches SW1 and SW2 connected in series with the ends of the winding and a pair of supply terminals respectively. A pair of flywheel diodes D1 and D2 are provided. The switches are both closed to allow the current to rise to a peak value and then one switch is opened to allow the current to decay at a first rate through one diode and then the second switch is opened to allow the current to decay at an increased rate through both diodes. The current is allowed to decay below the normal hold value and then is raised to the hold value.

IPC 1-7

H01F 7/18; H01H 47/04

IPC 8 full level

H01F 7/18 (2006.01); **H01H 47/04** (2006.01)

CPC (source: EP KR)

H01F 7/1805 (2013.01 - EP); **H01H 47/04** (2013.01 - EP); **H01H 73/02** (2013.01 - KR)

Citation (search report)

- [X] US 3706011 A 19721212 - VINCENT ANDREW W
- [Y] EP 0180060 A1 19860507 - IBM [US]
- [Y] US 4520420 A 19850528 - ARIYOSHI HIROMI [JP], et al

Cited by

EP0939411A3; EP0959238A3; GB2310540A; GB2310540B; EP2521154A1; CN102768909A; EP0711910A3; US5924435A; EP0737806A3; US5668476A; DE102008046374B3; DE4430867A1; US5673165A; EP0764473A3; US5812355A; AU701788B2; EP0834013A4; DE102008018259A1; EP0691464A3; US5825216A; US5645097A; DE19700521A1; DE19700521C2; US5823640A; CN1050811C; US10217586B2; US6781810B1; US8976502B2; US6298829B1; DE102008046375A1; US6394414B1; WO9612098A1; WO9419810A1; WO9635867A1; WO9605992A1; WO0129400A3; WO9804823A3; US10690067B2; WO9852201A1; WO9702970A1; EP2538429B1

Designated contracting state (EPC)

DE ES FR GB IT SE

DOCDB simple family (publication)

EP 0376493 A1 19900704; BR 8906712 A 19900911; GB 8829902 D0 19890215; JP H02230702 A 19900913; KR 900010844 A 19900709

DOCDB simple family (application)

EP 89312438 A 19891129; BR 8906712 A 19891222; GB 8829902 A 19881222; JP 33251189 A 19891221; KR 890018580 A 19891214