

Title (en)

ACTIVE MATERIAL LOW POWER ELECTRICAL SWITCHING MECHANISM AND DRIVE CIRCUIT THEREFOR

Title (de)

ELEKTRISCHER KLEINLEISTUNGSSCHALTMECHANISMUS MIT AKTIVEN MATERIAL UND ZUGEHÖRIGER STEUERSCHALTUNG

Title (fr)

MECANISME DE COMMUTATION ELECTRIQUE DE FAIBLE PUISSANCE A MATIERE ACTIVE ET CIRCUIT DE COMMANDE DESTINE A CE DERNIER

Publication

EP 1171935 B1 20030611 (EN)

Application

EP 00927432 A 20000418

Priority

- GB 0001508 W 20000418
- GB 9908930 A 19990419

Abstract (en)

[origin: WO0064022A1] A drive circuit for a residual current device comprises a transformer having a first and second primary coil each having n1 turns, and a secondary coil having n2 turns arranged to output a drive voltage responsive to any current imbalance between the respective electric currents flowing in the first and second primary coils. In order to achieve as high a drive voltage as possible the transformer is arranged to saturate at a relatively low level of current imbalance thus causing the back-EMF voltage generated across the secondary coil to spike resulting in a low power high voltage drive signal being output. Preferably, the secondary coil output is rectified, smoothed, and multiplied before being used as a drive signal for an active material bender used as an actuator in a circuit breaker mechanism.

IPC 1-7

H02H 3/33; H01H 71/12

IPC 8 full level

H01H 71/12 (2006.01); **H01H 83/02** (2006.01); **H01H 83/22** (2006.01); **H02H 3/33** (2006.01); **H01H 71/40** (2006.01)

CPC (source: EP)

H01H 71/12 (2013.01); **H01H 83/226** (2013.01); **H01H 71/127** (2013.01); **H01H 71/40** (2013.01)

Cited by

EP1157399B1

Designated contracting state (EPC)

DE ES FR GB IT NL

DOCDB simple family (publication)

WO 0064022 A1 20001026; AU 4583800 A 20001102; CN 1347583 A 20020501; DE 60003305 D1 20030717; DE 60003305 T2 20040429; EP 1171935 A1 20020116; EP 1171935 B1 20030611; GB 9908930 D0 19990616; HK 1041620 A1 20020712; HK 1041620 B 20031121; JP 2002542754 A 20021210

DOCDB simple family (application)

GB 0001508 W 20000418; AU 4583800 A 20000418; CN 00806445 A 20000418; DE 60003305 T 20000418; EP 00927432 A 20000418; GB 9908930 A 19990419; HK 02103298 A 20020502; JP 2000613050 A 20000418