

Title (en)

Self-regulated transformer-inductor with air gaps.

Title (de)

Selbstregulierter Transformator-Induktor mit Luftspalten.

Title (fr)

Transformateur-inducteur auto-régulé à entrefers.

Publication

EP 0339164 A1 19891102 (FR)

Application

EP 88420140 A 19880429

Priority

CA 534843 A 19870415

Abstract (en)

The transformer comprises a magnetic core (1) with three legs, the two outer legs (3, 4) of which each define an air-gap (8) at their centre. Two windings, a first AC one (9a, 9b) and a second DC one (10a, 10b) are coiled on each outer leg. Primary (12) and secondary (16) coils are arranged on the central leg (2), the first being fed with AC by a source (13), and the other feeding an external load with AC. The first two windings are connected in series and fed with AC by the source, possibly across an additional coil arranged on the central leg, whereas the second two windings are connected in series and fed by the current from the first windings following rectification by a diode bridge (11). The current flowing in the second two windings generates a magnetic flux in a closed circuit defined by the outer legs. The alternating currents in the primary coil and the first two windings are coupled to first and second alternating magnetic fluxes which add together in the central leg and flow respectively in two closed circuits defined, on the one hand, by the central leg and one outer leg, and, on the other hand, by the central leg and the other outer leg. The transformer feeds the external load from the source whilst regulating the source and feed voltages. <IMAGE>

IPC 1-7

H01F 29/14

IPC 8 full level

G05F 3/06 (2006.01); **H01F 29/14** (2006.01)

CPC (source: EP US)

G05F 3/06 (2013.01 - EP US); **H01F 29/14** (2013.01 - EP US); **H01F 2029/143** (2013.01 - EP US); **Y10S 174/17** (2013.01 - EP US); **Y10S 174/25** (2013.01 - EP US)

Citation (search report)

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- [AD] EP 0194163 A1 19860910 - HYDRO QUEBEC [CA]
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Designated contracting state (EPC)

AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

US 4766365 A 19880823; AU 1524588 A 19900215; AU 603437 B2 19901115; CA 1258881 A 19890829; EP 0339164 A1 19891102

DOCDB simple family (application)

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