

## Title (en)

SELF-CONTROLLED VARIABLE INDUCTANCE WITH GAPS, AND ELECTRICAL SYSTEM HAVING SUCH AN INDUCTANCE

## Publication

**EP 0194163 B1 19890614 (FR)**

## Application

**EP 86400011 A 19860106**

## Priority

CA 472204 A 19850116

## Abstract (en)

[origin: US4620144A] An electric power apparatus, namely a variable inductor comprising a magnetic core provided with a center limb and two outer limbs all having first and second ends. The first ends are interconnected through a first common point of the magnetic core, and the second ends through a second common point of this core. Two primary windings disposed respectively around the two outer limbs are connected in series and supplied with an alternating current, while two control windings also connected in series are respectively superposed to the two primary windings. The alternating current of the primary windings is rectified through a diode bridge for supplying with direct current the control windings. The direction of the different windings along with their interconnections are selected so that the alternating and direct currents induce in one of the two outer limbs alternating and direct current magnetic fluxes which assist each other or which are in opposition and in the other of these two limbs alternating and direct current magnetic fluxes which are in opposition or which assist each other, respectively, depending on the positive or negative value of the alternating current. Each outer limb comprises an air gap traversed by the resultant magnetic flux induced in this limb, and preferably disposed in the center of the corresponding primary and control windings.

## IPC 1-7

**H01F 29/14**

## IPC 8 full level

**C07J 31/00** (2006.01); **H01F 27/42** (2006.01); **H01F 29/14** (2006.01); **H02M 5/10** (2006.01); **H02M 5/12** (2006.01)

## CPC (source: EP KR US)

**H01F 27/42** (2013.01 - KR); **H01F 29/14** (2013.01 - EP US); **H01F 2029/143** (2013.01 - EP US); **Y10S 505/879** (2013.01 - EP US)

## Cited by

EP0339164A1

## Designated contracting state (EPC)

AT BE CH DE FR GB IT LI NL SE

## DOCDB simple family (publication)

**EP 0194163 A1 19860910**; **EP 0194163 B1 19890614**; AU 5171785 A 19860724; AU 576137 B2 19880811; BR 8506473 A 19860902; CA 1229381 A 19871117; CN 86100229 A 19860716; CN 86100229 B 19881207; DE 3664016 D1 19890720; ES 550602 A0 19870516; ES 8705992 A1 19870516; JP H07112350 B2 19951129; JP S61167698 A 19860729; KR 860006121 A 19860818; KR 900000432 B1 19900130; MX 159950 A 19891013; US 4620144 A 19861028

## DOCDB simple family (application)

**EP 86400011 A 19860106**; AU 5171785 A 19851230; BR 8506473 A 19851223; CA 472204 A 19850116; CN 86100229 A 19860115; DE 3664016 T 19860106; ES 550602 A 19851231; JP 443486 A 19860114; KR 860000167 A 19860114; MX 121386 A 19860113; US 73409985 A 19850515