

Title (en)

Method for oscillating an electromagnetic actuator

Title (de)

Verfahren zum Anschwingen eines elektromagnetischen Aktuators

Title (fr)

Procédé pour osciller un actionneur électromagnétique

Publication

EP 1099828 B1 20040331 (DE)

Application

EP 00121922 A 20001007

Priority

DE 19954416 A 19991112

Abstract (en)

[origin: EP1099828A2] The method involves alternately stimulating magnet coils (4A,4B) at a defined frequency starting from a rest state, in which the armature (4D) is held centrally by restoring springs (2A,2B), using an essentially sinusoidal alternating voltage instead of the conventional rectangular wave voltage. The voltage can be either a variable continuous voltage or a variable pulse-width modulated voltage.

IPC 1-7

F01L 9/04

IPC 8 full level

F01L 9/20 (2021.01); **H01F 7/18** (2006.01); **H02K 33/04** (2006.01)

CPC (source: EP US)

F01L 9/20 (2021.01 - EP US); **Y10T 137/0318** (2015.04 - EP US)

Cited by

DE102005024173A1; EP1271571A1; FR2853002A1; CN107332424A; US6659422B2; US6920029B2

Designated contracting state (EPC)

DE ES FR GB IT SE

DOCDB simple family (publication)

EP 1099828 A2 20010516; **EP 1099828 A3 20020327**; **EP 1099828 B1 20040331**; DE 19954416 A1 20010517; DE 50005882 D1 20040506; ES 2215537 T3 20041016; JP 2001217123 A 20010810; US 6390113 B1 20020521

DOCDB simple family (application)

EP 00121922 A 20001007; DE 19954416 A 19991112; DE 50005882 T 20001007; ES 00121922 T 20001007; JP 2000341792 A 20001109; US 70933300 A 20001113