

Title (en)

SOLENOID ACTUATOR WITH POSITION-INDEPENDENT FORCE

Title (de)

SOLENOID-BETÄTIGUNGSGLIED MIT POSITIONSUNABHÄNGIGER KRAFT

Title (fr)

ACTIONNEUR A SOLENOIDE A FORCE INDEPENDANTE DE LA POSITION

Publication

**EP 1428236 A4 20090826 (EN)**

Application

**EP 02742286 A 20020621**

Priority

- US 0220020 W 20020621
- US 88631201 A 20010621

Abstract (en)

[origin: WO03001547A1] A device and method for control of a moving member (15) of a solenoid having a coil (13), air gap (25) and moving member (15) over the entire range of the movement. A sensor (17) is used for sensing the instantaneous value of the flux density in the air gap (25), and is converted to a voltage proportional to the intensity of the value. The value is converted to a unipolar drive current. The preferred sensor (17) is a Hall effect semiconductor magnetic field sensor. The solenoid (10) may include a bias (23) restraining the moving member (15).

IPC 1-7

**H01H 47/00**; G01R 33/00; H01L 43/06; G01B 7/14

IPC 8 full level

**H01F 7/16** (2006.01); **H01F 7/18** (2006.01)

CPC (source: EP)

**H01F 7/1607** (2013.01); **H01F 7/1844** (2013.01); **G05B 2219/41333** (2013.01)

Citation (search report)

- [DXY] US 5621293 A 19970415 - GENNESSEAU ANDRE [FR]
- [DY] US 4665348 A 19870512 - STUPAK JR JOSEPH J [US]
- [Y] US 5003211 A 19910326 - GROOM NELSON J [US]
- See references of WO 03001547A1

Cited by

US9347579B2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

**WO 03001547 A1 20030103**; EP 1428236 A1 20040616; EP 1428236 A4 20090826; JP 2005520320 A 20050707

DOCDB simple family (application)

**US 0220020 W 20020621**; EP 02742286 A 20020621; JP 2003507840 A 20020621