

Title (en)

ELECTROMAGNETIC ACTUATING APPARATUS

Title (de)

ELEKTROMAGNETISCHE STELLVORRICHTUNG

Title (fr)

DISPOSITIF D'ACTIONNEUR ÉLECTROMAGNÉTIQUE

Publication

EP 2630647 A2 20130828 (DE)

Application

EP 11833885 A 20111020

Priority

- DE 102010048808 A 20101020
- EP 2011068380 W 20111020

Abstract (en)

[origin: WO2012052528A2] The invention relates to an electromagnetic actuating apparatus having an armature unit, which can be moved through a movement distance in an axial direction relative to a stationary core unit and in reaction to an operating current being passed through a coil unit, which armature unit magnetically interacts axially at one end with the core unit over a control range which at least partially overlaps axially along the movement distance, which, as a section of the armature unit, has a first profile section and, as a section of the core unit, has a second profile section, with an air gap formed between them and forms an extent at right angles to the axial direction. The invention provides that a cross section of the first and second profile sections that has a flux effect for a magnetic flux flowing across the air gap where the operating current flows is designed such that, in reaction to a shortening of the air-gap extent which is produced by tilting and/or deflection of the armature unit from the axial direction, a magnetic flux resistance of the first and/or of the second profile section rises in the region of said shortening, in particular being subject to magnetic saturation, and resulting in a force on the armature unit that counteracts the tilting and/or deflection.

IPC 8 full level

H01F 7/08 (2006.01); **H01F 7/13** (2006.01)

CPC (source: EP US)

H01F 7/081 (2013.01 - EP US); **H01F 7/121** (2013.01 - US); **H01F 7/13** (2013.01 - EP US)

Citation (search report)

See references of WO 2012052528A2

Cited by

DE102020132351A1; WO2022117818A1

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