

Title (en)  
ELECTROMAGNETIC ACTUATOR AND METHOD FOR PRODUCING SUCH AN ACTUATOR

Title (de)  
ELEKTROMAGNETISCHER AKTUATOR UND VERFAHREN ZUR HERSTELLUNG SOLCH EINES AKTUATORS

Title (fr)  
ACTIONNEUR ÉLECTROMAGNÉTIQUE ET PROCÉDÉ DE FABRICATION D'UN TEL ACTIONNEUR

Publication  
**EP 3061103 A1 20160831 (FR)**

Application  
**EP 14789805 A 20141020**

Priority  
• FR 1360246 A 20131021  
• EP 2014072429 W 20141020

Abstract (en)  
[origin: WO2015059086A1] The invention relates to an electromagnetic actuator (10), which includes a ferromagnetic housing (12) extending in a longitudinal direction (X) and having a height (H1) in a vertical direction (Z) perpendicular to the longitudinal direction (X), two coils (14, 16) arranged inside the housing and each comprising at least one winding (36, 38) around the longitudinal direction (X), a ferromagnetic member (24) arranged between the coils, and a ferromagnetic plunger (22) subjected to a magnetic field generated by the coils, the plunger being movable in the longitudinal direction and suitable for being immobilized in three different longitudinal positions depending on the field generated by the coils. The ferromagnetic member (24) is rigidly connected to the housing (12) and has, in the vertical direction (Z), a size (H2) that is greater than one sixth of the height (H1) of the housing, the ferromagnetic member (24) being in addition located at a distance that is smaller than one fourth of a gap (E) in the longitudinal direction (X) between the two coils, relative to a median plane (P) that is perpendicular to the longitudinal direction and located at the midpoint between the two coils.

IPC 8 full level  
**H01F 7/08** (2006.01); **H01F 7/121** (2006.01); **H01F 7/127** (2006.01); **H01F 7/16** (2006.01)

CPC (source: EP US)  
**H01F 7/081** (2013.01 - EP US); **H01F 7/121** (2013.01 - EP US); **H01F 7/127** (2013.01 - EP US); **H01F 7/1607** (2013.01 - EP US);  
**H01F 2007/1692** (2013.01 - EP US)

Citation (search report)  
See references of WO 2015059086A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**FR 3012251 A1 20150424; FR 3012251 B1 20170310**; CN 105580094 A 20160511; CN 105580094 B 20180116; EP 3061103 A1 20160831; EP 3061103 B1 20171004; JP 2016534689 A 20161104; JP 6797684 B2 20201209; US 2016196911 A1 20160707; US 9704635 B2 20170711; WO 2015059086 A1 20150430

DOCDB simple family (application)  
**FR 1360246 A 20131021**; CN 201480052277 A 20141020; EP 14789805 A 20141020; EP 2014072429 W 20141020; JP 2016525075 A 20141020; US 201414917163 A 20141020