

Title (en)  
ELECTOMAGNETIC ACTUATING DEVICE

Title (de)  
ELEKTROMAGNETISCHE STELLVORRICHTUNG

Title (fr)  
DISPOSITIF DE POSITIONNEMENT ÉLECTROMAGNÉTIQUE

Publication  
**EP 2593945 B1 20140101 (DE)**

Application  
**EP 11735400 A 20110629**

Priority  
• DE 202010010371 U 20100716  
• EP 2011060901 W 20110629

Abstract (en)  
[origin: WO2012007279A2] The invention relates to an electromagnetic actuating device, in particular camshaft adjustment device, having an armature unit (14) which can be driven in the axial direction or parallel thereto in reaction to energization of a stationary, axially orientated coil unit (10) and is designed to interact with a slide and/or plunger unit (16) which extends in the axial direction, in particular a plunger unit which brings about camshaft adjustment of an internal combustion engine, wherein permanent magnet means (14) are provided on and/or in the armature unit and/or the slide or plunger unit, and the coil unit and armature unit are accommodated at least partially in a housing unit or carrier unit. According to the invention there is provision that the carrier unit is assigned stationary magnetic-field-detection means (22), which are designed to interact magnetically in a contactless fashion with the permanent magnet means, and are designed in such a way that in an energized state and in a non-energized state of the coil unit an axial position of the armature unit and/or of the slide or plunger unit can be determined electronically by evaluating a magnetic field detection signal of the magnetic field detection means, and magnetic flux-directing means (30, 32; 34; 36; 38; 40, 42) or assigned to the coil unit in such a way that they deflect a magnetic coil field, generated by the coil unit, from the magnetic field detection means and/or attenuate said coil field with respect to said detection means.

IPC 8 full level  
**H01F 7/16** (2006.01)

CPC (source: EP US)  
**F01L 1/047** (2013.01 - EP US); **F01L 13/0036** (2013.01 - EP US); **H01F 7/121** (2013.01 - US); **H01F 7/1646** (2013.01 - EP US); **H01F 7/1844** (2013.01 - EP US); **F01L 2013/0052** (2013.01 - EP US); **F01L 2820/031** (2013.01 - EP US)

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

DOCDB simple family (publication)  
**DE 202010010371 U1 20111017**; CN 103109331 A 20130515; CN 103109331 B 20170728; EP 2593945 A2 20130522; EP 2593945 B1 20140101; US 2013113582 A1 20130509; US 9318247 B2 20160419; WO 2012007279 A2 20120119; WO 2012007279 A3 20120308

DOCDB simple family (application)  
**DE 202010010371 U 20100716**; CN 201180044489 A 20110629; EP 11735400 A 20110629; EP 2011060901 W 20110629; US 201113810566 A 20110629