

Title (en)
ELECTROMAGNETIC ACTUATING MECHANISM

Title (de)
ELEKTROMAGNETISCHE STELLVORRICHTUNG

Title (fr)
DISPOSITIF DE RÉGLAGE ÉLECTROMAGNÉTIQUE

Publication
EP 3087575 A1 20161102 (DE)

Application
EP 14828454 A 20141218

Priority
• DE 102013114830 A 20131223
• EP 2014078547 W 20141218

Abstract (en)
[origin: WO2015097068A1] The invention relates to an electromagnetic actuating mechanism comprising an armature unit (10) which can be moved by a certain armature excursion along an axial direction of travel as a result of stationary coil means being energized, plunger means (16) which are associated with the armature unit, are designed such that the end thereof cooperates with an external actuating partner, and can be moved by a certain plunger excursion along the direction of travel from a starting position into an engagement position, and spring means (22) which bias the plunger means in the direction of travel. The plunger means are guided so as to be movable relative to the armature unit and are externally provided with a ramp section and/or conical section (28) between a plunger section that has a larger diameter (26) and is located at the end facing the armature and a plunger section (30) having a smaller diameter. A pressure member (32) which is accommodated in a biased state in a housing sector (18) guiding the plunger means externally cooperates with the ramp section or conical section, the ramp section or conical section being designed on the plunger means in such a way that if the pressure member applies force to the ramp section or conical section, the pressure member returns the plunger means in the direction of the starting position, in particular into the starting position, against the bias of the spring means when the coil unit is not energized and/or the armature unit is not moved, the excursion of the armature being smaller than that of the plunger.

IPC 8 full level
F01L 13/00 (2006.01); **H01F 7/121** (2006.01); **H01F 7/13** (2006.01); **H01F 7/16** (2006.01)

CPC (source: EP US)
F01L 13/0036 (2013.01 - EP US); **H01F 7/121** (2013.01 - EP US); **H01F 7/13** (2013.01 - EP US); **H01F 7/1638** (2013.01 - EP US);
F01L 2013/0052 (2013.01 - EP US); **F01L 2820/031** (2013.01 - EP US)

Citation (search report)
See references of WO 2015097068A1

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)
DE 102013114830 A1 20150625; CN 105830179 A 20160803; CN 105830179 B 20180123; EP 3087575 A1 20161102;
EP 3087575 B1 20170712; US 2016322146 A1 20161103; US 9741481 B2 20170822; WO 2015097068 A1 20150702

DOCDB simple family (application)
DE 102013114830 A 20131223; CN 201480070163 A 20141218; EP 14828454 A 20141218; EP 2014078547 W 20141218;
US 201415107651 A 20141218