

Title (en)
BISTABLE MAGNETIC ACTUATOR

Title (de)
BISTABILER MAGNETAKTOR

Title (fr)
ACTIONNEUR MAGNÉTIQUE BISTABLE

Publication
EP 2561523 B1 20151111 (DE)

Application
EP 11722720 A 20110406

Priority
• DE 102010017874 A 20100421
• DE 2011000371 W 20110406

Abstract (en)
[origin: WO2011131167A2] The invention relates to a bistable magnetic actuator with a polarized magnetic circuit having parallel working air gaps, wherein a flat permanent magnet is integrated between the outer limbs of a U-shaped soft-iron yoke and carries a soft-iron center limb and acts upon a rocker armature mounted on the center limb leg with a magnetic flux generated by a permanent magnet. According to the invention, a separately actuatable excitation coil provides on each outer limb switching pulses to the rocker armature in order to pass from a permanent-magnetically, self-maintaining switching position to the other position. The magnetic flux generated by the permanent magnet passes via the parallel circuit closed by the rocker armature into the other parallel magnetic circuit having the coil that is not electromagnetically excited when an electromagnetic flux is generated in the opposite direction by the excitation coil of the first magnetic circuit, thereby commutating the rocker armature.

IPC 8 full level
H01F 7/14 (2006.01); **H01F 7/122** (2006.01); **H01H 50/24** (2006.01); **H01H 51/22** (2006.01)

CPC (source: EP US)
H01F 7/122 (2013.01 - EP US); **H01F 7/14** (2013.01 - EP US); **H01H 50/24** (2013.01 - US); **H01H 51/2236** (2013.01 - EP US); **H01H 51/2272** (2013.01 - EP US)

Cited by
US11614614B2; WO2018145704A1

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 102010017874 A1 201111027; **DE 102010017874 B4 20130905**; BR 112013008688 A2 20220303; CN 102859618 A 20130102; CN 102859618 B 20160504; EP 2561523 A2 20130227; EP 2561523 B1 20151111; ES 2558749 T3 20160208; RU 2012139664 A 20140527; RU 2547815 C2 20150410; SI 2561523 T1 20160331; US 2013076462 A1 20130328; US 8461951 B2 20130611; WO 2011131167 A2 20111027; WO 2011131167 A3 20111229

DOCDB simple family (application)
DE 102010017874 A 20110406; BR 112013008688 A 20110406; CN 201180020320 A 20110406; DE 2011000371 W 20110406; EP 11722720 A 20110406; ES 11722720 T 20110406; RU 2012139664 A 20110406; SI 201130735 T 20110406; US 201113639730 A 20110406