

Title (en)

A MAGNETIC CIRCUIT SWITCHING DEVICE WITH SINGLE-SIDED ATTRACTION

Title (de)

MAGNETKREISSCHALTVORRICHTUNG MIT EINSEITIGER ANZIEHUNG

Title (fr)

DISPOSITIF DE COMMUTATION DE CIRCUIT MAGNÉTIQUE À ATTRACTION MONOFACE

Publication

EP 3179488 A1 20170614 (EN)

Application

EP 15198358 A 20151208

Priority

EP 15198358 A 20151208

Abstract (en)

A magnetic circuit switching device with single-sided attraction includes a housing (10) with a first side (11) and a second side (12) individually arranged at either side, where the first side (11) has an attraction surface (13) to attract an iron core (30); a permanent magnet (50) having a first type magnetic pole (51) and a second type magnetic pole (52) individually arranged at inner and outer side with opposite properties; a nonconductive axial tube (60) for the iron core (30) to engage, having an opening (61) at the right side (32) extending to the second side (12) of the housing (10); and a spring (70) providing elastic force for the iron core (30) to displace. With a magnetic path alteration function and the elastic force from the spring (70), the structure is able to keep the iron core (30) in a pre-determined position. Therefore the iron core (30) has a wider stretching range for operation, increasing the possibilities of wider application and ensuring in-time adjusting in case of deviation and wear and tear of the device. Also, the present invention requires less power for operation, thus achieving an energy-saving effect.

IPC 8 full level

H01F 7/122 (2006.01); **H01F 7/16** (2006.01)

CPC (source: EP)

H01F 7/122 (2013.01); **H01F 7/1615** (2013.01)

Citation (applicant)

- US 6246131 B1 20010612 - SHENG CHIH-SHENG [TW]
- US 6057750 A 20000502 - SHENG CHIH-SHENG [TW]

Citation (search report)

- [Y] GB 2099223 A 19821201 - HOSIDEN ELECTRONICS CO
- [Y] US 5029807 A 19910709 - FUCHS FRANZ [DE]
- [AD] US 6246131 B1 20010612 - SHENG CHIH-SHENG [TW]

Cited by

CN109473310A; CN110111971A

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)

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