

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 MONOFAÇE

Publication  
**EP 3179488 A1 20170614 (EN)**

Application  
**EP 15198358 A 20151208**

Priority  
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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

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