

Title (en)
SMALL BISTABLE HIGH-PERFORMANCE RELAY

Title (de)
BISTABILES KLEINRELAIS GROSSER LEISTUNG

Title (fr)
PETIT RELAIS BISTABLE À HAUTES PERFORMANCES

Publication
EP 2561530 A1 20130227 (DE)

Application
EP 11724942 A 20110411

Priority
• DE 102010017872 A 20100421
• DE 2011000395 W 20110411

Abstract (en)
[origin: WO2011131168A1] The invention relates to a small bistable high-performance relay, comprising an insulating-material housing with a first housing chamber (1b) in which a single-phase contact module (4) with two busbars (8a, 8b) and a contact spring (13) are arranged, wherein the contact spring (13) is fixedly connected with one leg end to one of the busbars (8a) and acts with its other free leg end that carries at least one mobile contact (20) upon at least one fixed contact (21) located on the second busbar (8b), and wherein a bistable magnetic actuator module (3) having a pivotable armature (11) is arranged in a second housing chamber (1a), said armature deflecting the contact spring (13) by means of an output device (6; 23) arranged in the housing in order to close or interrupt a circuit via the busbars (8a, 8b). According to the invention, the contact module (4) and the actuator module (3) are arranged in one or two levels in the insulating-material housing, wherein the contact module (4) comprises a multi-layered contact spring (13) that is bent in a U shape to form an electrodynamic current loop while the actuator module (3) comprises a one-piece, U-shaped yoke (14) having at least one excitation coil (17) per yoke limb and a yoke center limb (16) supported by a flat permanent magnet (15) and on which is mounted a slightly V-shaped rocker armature (11).

IPC 8 full level
H01H 45/04 (2006.01); **H01H 1/26** (2006.01); **H01H 51/12** (2006.01); **H01H 51/22** (2006.01); **H01H 50/04** (2006.01)

CPC (source: EP US)
H01H 1/26 (2013.01 - EP US); **H01H 45/04** (2013.01 - US); **H01H 51/12** (2013.01 - EP US); **H01H 51/2272** (2013.01 - EP US); **H01H 50/042** (2013.01 - EP US)

Citation (search report)
See references of WO 2011131168A1

Cited by
CN105140078A

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 102010017872 A1 20111027; **DE 102010017872 B4 20120606**; BR 112013007456 A2 20220802; CN 102870180 A 20130109; CN 102870180 B 20151125; EP 2561530 A1 20130227; EP 2561530 B1 20140212; ES 2456915 T3 20140424; RU 2012140394 A 20140527; RU 2524373 C2 20140727; US 2013093544 A1 20130418; US 9053885 B2 20150609; WO 2011131168 A1 20111027

DOCDB simple family (application)
DE 102010017872 A 20100421; BR 112013007456 A 20110411; CN 201180020308 A 20110411; DE 2011000395 W 20110411; EP 11724942 A 20110411; ES 11724942 T 20110411; RU 2012140394 A 20110411; US 201113641736 A 20110411