

Title (en)  
SHORT-CIRCUITING DEVICE FOR USE IN LOW-VOLTAGE AND MEDIUM-VOLTAGE SYSTEMS FOR PROTECTING PARTS AND PERSONNEL

Title (de)  
KURZSCHLIESSEINRICHTUNG FÜR DEN EINSATZ IN NIEDER- UND MITTELSPANNUNGSANLAGEN ZUM SACH- UND PERSONENSCHUTZ

Title (fr)  
DISPOSITIF DE MISE EN COURT-CIRCUIT DESTINÉ À ÊTRE UTILISÉ DANS DES SYSTÈMES À BASSES ET MOYENNES TENSIONS POUR LA PROTECTION DES BIENS ET DES PERSONNES

Publication  
**EP 3479391 B1 20200422 (DE)**

Application  
**EP 17728201 A 20170607**

Priority  
• DE 102016008066 A 20160630  
• DE 102016115222 A 20160817  
• EP 2017063765 W 20170607

Abstract (en)  
[origin: WO2018001686A1] The invention relates to a short-circuiting device for use in low-voltage and medium-voltage systems for protecting parts and personnel, comprising a switching element which can be operated by the tripping signal of a fault detection device, two mutually opposite contact electrodes having power supply means, wherein contact can be made with said contact electrodes at an electrical circuit having connections at different potentials, furthermore, in at least one of the contact electrodes, a moving contact part which is under mechanical prestress and executes a movement to the further contact electrode in a manner assisted by spring force in the event of a short circuit, a sacrificial element as spacer between the contact electrodes and also having an electrical connection between the sacrificial element and the switching element on the one hand and one of the contact electrodes on the other hand, in order to cause current flow-induced thermal deformation or destruction of the sacrificial element in a targeted manner. According to the invention, the moving contact part is in the form of a hollow cylinder which is closed on one side and a spring for generating prestress is used in the hollow cylinder. The hollow cylinder is guided in a movable manner in a complementary cutout in the first contact electrode so as to form a sliding contact. In the region of the base of the closed hollow cylinder, the cylinder wall of said hollow cylinder is configured to turn into a cone on its outer circumferential side. Furthermore, starting from the base, a first pin-like extension which is situated opposite a second pin-like projection which is insulated from the contact electrodes is arranged in the interior of the hollow cylinder, wherein the sacrificial element, in the form of a bolt or screw, is arranged between the first and the second pin-like projection. A cutout which is matched to the external cone of the moving contact and has an internal cone is provided in the second contact electrode, wherein the external cone and internal cone form a bounce-free short-circuit contact region with a force-fitting and interlocking connection on account of the plastic deformation which occurs.

IPC 8 full level  
**H01H 37/76** (2006.01); **H01H 39/00** (2006.01); **H01H 79/00** (2006.01)

CPC (source: EP US)  
**H01H 37/765** (2013.01 - EP US); **H01H 39/004** (2013.01 - EP); **H01H 71/40** (2013.01 - US); **H01H 79/00** (2013.01 - EP US); **H01H 39/004** (2013.01 - US); **H01H 2039/008** (2013.01 - US); **H01H 2201/002** (2013.01 - US)

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 102016115222 A1 20180104**; **DE 102016115222 B4 20200213**; AU 2017290406 A1 20190124; AU 2017290406 B2 20191205; CN 109690723 A 20190426; CN 109690723 B 20200818; DK 3479391 T3 20200720; EP 3479391 A1 20190508; EP 3479391 B1 20200422; PL 3479391 T3 20201116; US 10529523 B2 20200107; US 2019252145 A1 20190815; WO 2018001686 A1 20180104

DOCDB simple family (application)  
**DE 102016115222 A 20160817**; AU 2017290406 A 20170607; CN 201780050537 A 20170607; DK 17728201 T 20170607; EP 17728201 A 20170607; EP 2017063765 W 20170607; PL 17728201 T 20170607; US 201716313042 A 20170607