

Title (en)  
VACUUM CIRCUIT BREAKER

Title (de)  
VAKUUM-UNTERBRECHERSCHALTER

Title (fr)  
COUPE-CIRCUIT A VIDE

Publication  
**EP 1618577 A4 20060802 (EN)**

Application  
**EP 04723435 A 20040325**

Priority  
• RU 2004000114 W 20040325  
• RU 2003108296 A 20030326

Abstract (en)  
[origin: WO2004086437A1] The device comprises phase modules mounted on metal base (1), inside which drives with magnetic latch (2, 3, 4), synchronizing (6) and interlock (7) shafts, block contacts are situated. The phase modules comprise supporting insulators (9), with vacuum chambers (10) positioned inside, contact terminals (11, 12) and traction insulators (14). Shapes of traction insulator (14) and immovable insulation tubular fragment (16) provide labyrinth air gap between the contact terminals and the base, increasing electrical strength of the clearance. When the circuit breaker operates, resilient conductive spirals (17) roll in the annular clearance between terminal (11) and movable contact bush (18), providing multiple-point contact of high conductivity. Drive magnetic systems (2, 3) constitute two bowl-shaped component parts made of high - coercivity material. The contact terminals are produced of an extrusion profile. Manual deenergization generator (20) is implemented as an independent magnetic system, which, when disconnecting, generates a current pulse, and electrically connected with drive coils (4). Remote indicator of main contact positions (19) is connected with the mechanism of synchronizing shaft with the flexible connection in the form of encapsulated wire cable. Socket contact separators (23) are made of aluminum alloy using extrusion process.

IPC 8 full level  
**H01H 33/666** (2006.01); **H01H 1/58** (2006.01); **H01H 9/16** (2006.01); **H01H 33/24** (2006.01)

CPC (source: EP)  
**H01H 33/6662** (2013.01); **H01H 1/5833** (2013.01); **H01H 9/16** (2013.01); **H01H 33/24** (2013.01); **H01H 2033/6613** (2013.01)

Citation (search report)  
• [A] DE 2320744 A1 19741121 - DRIESCHER SPEZIALFAB FRITZ  
• [A] US 5597992 A 19970128 - WALKER JAN J [US]  
• [A] US 4434331 A 19840228 - SAKUMA SHINZO [JP], et al  
• See references of WO 2004086437A1

Cited by  
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Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**WO 2004086437 A1 20041007**; AT E426910 T1 20090415; CN 100375211 C 20080312; CN 1795520 A 20060628; DE 602004020206 D1 20090507; EP 1618577 A1 20060125; EP 1618577 A4 20060802; EP 1618577 B1 20090325; HK 1093379 A1 20070302; RU 2249874 C2 20050410; UA 79370 C2 20070611; ZA 200508667 B 20061025

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**RU 2004000114 W 20040325**; AT 04723435 T 20040325; CN 200480014469 A 20040325; DE 602004020206 T 20040325; EP 04723435 A 20040325; HK 06114174 A 20061227; RU 2003108296 A 20030326; UA A200510009 A 20040325; ZA 200508667 A 20051025