

Title (en)
Low voltage circuit breaker

Title (de)
Niederspannungsschalter

Title (fr)
Disjoncteur basse tension

Publication
EP 0621615 B1 19970212 (DE)

Application
EP 94105111 A 19940331

Priority
IT MI930789 A 19930421

Abstract (en)
[origin: EP0621615A1] The low-voltage circuit breaker contains a stationary contact (2) and a moving contact (3). Both contacts and an arc splitter plate stack (6) are arranged in an arc extinguishing chamber (5). An extension piece (14), which extends in the direction of the arc splitter plate stack (6) and is used to accommodate an arc base is fitted on the stationary contact (2). A section, which is constructed in the form of a plate, of a power supply lead to the stationary contact (2) is expanded in a U-shape. The two limbs of the U are bridged at their free ends by a yoke. A conductor piece is fitted to the yoke. This conductor piece is in the form of a plate, is formed by a contact tongue (13) of the stationary contact (2) and by an extension piece (14) fastened thereto, and is inclined in the direction of the arc splitter plate stack (6) with respect to that section of the power supply lead which is in the form of a plate. An insulating piece (15) is arranged in the arc extinguishing chamber (5). This insulating piece (15) is provided with an opening, screens that section of the power supply lead of the stationary contact (2) in the form of a plate from the arc extinguishing chamber (5), and the conductor piece, which is in the form of a plate, is guided through its opening. This circuit breaker is distinguished by a low level of contact erosion and a low level of wear of the arc extinguishing chamber (5) while having a high switching capacity. This is a result of the fact that extinguishing gas which emerges from the insulating part under the influence of an arc flows in a guided manner in the direction of the arc splitter plate stack (6), and that the base of the switching arc which has its root on the stationary contact (2) is guided particularly quickly into the arc splitter plate stack by this gas flow and by the force of the magnetic field of the current which is to be disconnected. <IMAGE>

IPC 1-7
H01H 9/46

IPC 8 full level
H01H 9/34 (2006.01); **H01H 9/46** (2006.01)

CPC (source: EP US)
H01H 9/34 (2013.01 - EP US); **H01H 9/46** (2013.01 - EP US)

Cited by
JP2017539059A; EP2048678A3; EP1693870A3; US8237074B2

Designated contracting state (EPC)
BE CH DE ES FR GB IT LI NL

DOCDB simple family (publication)
EP 0621615 A1 19941026; EP 0621615 B1 19970212; DE 4332546 A1 19941027; DE 59401787 D1 19970327; ES 2102088 T3 19970716; IT 1264164 B1 19960917; IT MI930789 A0 19930421; IT MI930789 A1 19941021; US 5475193 A 19951212; ZA 942756 B 19960216

DOCDB simple family (application)
EP 94105111 A 19940331; DE 4332546 A 19930924; DE 59401787 T 19940331; ES 94105111 T 19940331; IT MI930789 A 19930421; US 23091894 A 19940421; ZA 942756 A 19940421