

Title (en)

Miniature circuit breaker with two juxtaposed extinguishing chambers.

Title (de)

Kleinstschutzeschalter mit zwei nebeneinander angeordneten Löschkammern.

Title (fr)

Disjoncteur miniature à deux chambres de coupure accolées.

Publication

EP 0080924 A1 19830608 (FR)

Application

EP 82402118 A 19821122

Priority

FR 8122465 A 19811127

Abstract (en)

1. Miniature circuit breaker with high rupture capacity with a narrow insulating housing (10) comprising : - two juxtaposed extinguishing chambers (22, 24) located in the lower part of the housing and comprising a stacking of deionization plates (26) extending parallelly to the bottom (16) of the housing and enclosed by end plates one of which comes into abutment with the bottom (16), the two chambers being separated by an insulating wall (18) extending in the median line of the housing perpendicularly to said bottom (16), - two pairs of contacts (32, 34) each associated to one of said extinguishing chambers and located in an arcing chamber (28) in front of said plates (18) near the end plate opposite the bottom (16), the movable contact (32) moving between a closed contact position with a stationary contact (34) and an open position adjacent to said opposite end plate, in order to draw an initial arc extending parallelly to the plates (26) and pivoting by migration on a stationary horn (44) in order to spread out at the entrance of the chamber perpendicularly to the plates, - a contact carrier (32) in the form of a fork bridging said wall (18) and carrying at the end of each prong a movable contact, in order to move simultaneously said movable contacts when drawn two arcs extending parallelly and being flown through by currents of opposite directions, and to constitute a contact bridge with two series breaking intervals, - a control mechanism (36) of the fork-shaped carrier to open and close manually and/or automatically said circuit breaker, said arcing chambers (28) being symmetric with regard to the median line, each of said stationary horns (44) extending in rectilinear manner between the stationary contact (34) and the end (46) of the plate coupled with the bottom (16) in the associated arcing chamber (28), in order to limit the length of the stationary horn (44) in the arcing chamber, and a flow passage (54) disposed between the wall of the housing (10) and a lateral cheek (52) of delimitation of the arcing chamber (28) provoking communication between the extinguishing chamber (22) and a decompression enclosure (48) confined at the rear of the stationary horn (44).

Abstract (fr)

Un disjoncteur miniature à haut pouvoir de coupure comporte un contact mobile (32) en forme de fourche tirant, lors d'une manoeuvre d'ouverture, deux arcs parallèles parcourus par des courants de sens opposés dans deux chambres de formation d'arc (23) accolées. Une corne fixe (44) rectiligne relie le contact fixe (34) à l'entrée de la chambre de coupure (22) pour déplacer l'arc rapidement vers cette chambre (22).

IPC 1-7

H01H 73/18; **H01H 9/46**

IPC 8 full level

H01H 9/46 (2006.01); **H01H 73/18** (2006.01)

CPC (source: EP)

H01H 9/46 (2013.01); **H01H 73/18** (2013.01)

Citation (search report)

- [Y] FR 2154628 A1 19730511 - MAIER & CIE C
- [Y] FR 2975290 A1 20121123 - OREAL [FR]
- [Y] US 2769066 A 19561030 - CELLERINI ALBERT R
- [A] GB 745755 A 19560229 - FERGUSON PAILIN LTD
- [YE] EP 0053973 A1 19820616 - MERLIN GERIN [FR]

Cited by

CN104992861A; EP1085552A1; FR2613125A1; CN105097332A; KR100743128B1; CN105374595A; EP1282146A1; FR2828329A1; EP0345412A3; EP0148058A3; FR2557354A1

Designated contracting state (EPC)

BE CH DE GB IT LI NL SE

DOCDB simple family (publication)

EP 0080924 A1 19830608; **EP 0080924 B1 19850821**; DE 3265659 D1 19850926; FR 2517465 A1 19830603; FR 2517465 B1 19860502

DOCDB simple family (application)

EP 82402118 A 19821122; DE 3265659 T 19821122; FR 8122465 A 19811127