

Title (en)
Miniature circuit breaker with high rupture capacity.

Title (de)
Kleinselbstschalter mit hohem Schaltvermögen.

Title (fr)
Disjoncteur miniature à haut pouvoir de coupure.

Publication
EP 0053973 A1 19820616 (FR)

Application
EP 81401899 A 19811201

Priority
FR 8026166 A 19801209

Abstract (en)

1. Miniature circuit breaker with high rupture capacity with a narrow insulating housing (10) comprising : - two extinguishing chambers (34, 36) arranged side by side in the lower part of the housing with deionization plates (38) extending parallelly to the bottom (16) of the housing (10), the two arcing chambers being separated by an insulating wall (30) extending in the median line of the housing perpendicularly to said bottom (16), - two pairs of contacts (46, 50; 48, 52) each associated to one of said chambers and located in front of said plates (38), the moving contact (50, 52) moving in a way to draw an initial arc extending parallelly to the plates (38) and pivoting by migration on the horns (56, 58) in order to spread out at the entrance perpendicularly to the plates (38), - an input terminal (26) and an output terminal (28) of the circuit breaker arranged on the two narrow lateral faces of the housing, one of the terminals (26) being connected to one (48) of the stationary contacts, - a mechanism (66) to control the opening and the closing of the circuit breaker, - and a magnetic and thermal tripping device, the magnetic tripping device provided with a coil (68) inserted between the arcing chambers (34, 36) and the mechanism (66) and extending parallelly to said plates (38), characterized in that it comprises a contact carrier in the form of a fork (54) bridging said wall (30) and carrying at the end of each prong a movable contact (50, 52) to connect electrically these movable contacts (50, 52) and to constitute a contact bridge with two series breaking intervals, said fork (54) being controlled by the mechanism to move simultaneously the movable contacts (50, 52) in open and in closed position, that the two arcing chambers (34, 36), the coil (68) and the mechanism (66) are superposed and fill each the whole width of the housing and that the other terminal (28) is connected to the other stationary contact (46) by means of the said thermal tripping device and the said coil (68).

Abstract (fr)

L'invention est relative à un disjoncteur miniature à haut pouvoir de coupure. Le disjoncteur comporte des contacts mobiles (50, 52) portés par un support en forme de fourche (54) les contacts (50, 52) coopérant avec des contacts fixes (46, 48) pour tirer deux arcs connectés électriquement en série. A chaque paire de contacts (46, 50; 48, 52) est associée une chambre de coupure (34, 36), ces dernières étant disposées symétriquement de part et d'autre d'une cloison isolante (30). Une plaque métallique (32) s'étend à l'intérieur de la cloison isolante (30) pour constituer un écran de séparation des chambres de coupure (34, 36). La plaque métallique (32) comporte une extension agencée en patte (102) de support de la bilame (88) et de son dispositif (104) de réglage. La plaque métallique (32) comporte une deuxième extension (62) agencée en électrode de commutation de l'arc réalisant le shuntage des déclencheurs magnétique (64) et thermique (8 8). La bobine du déclencheur magnétique (64) est entourée d'une carcasse dont la face accolée aux chambres de coupure (34, 36) est ouverte.

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Citation (search report)

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