

Title (en)

Magnetothermal release mechanism associated with the mechanism of a miniature circuit breaker with an insulating casing.

Title (de)

Magnetothermischer Auslöser der dem Mechanismus eines Miniaturschalters mit Isoliergehäuse zugeordnet ist.

Title (fr)

Déclencheur magnétothermique associé au mécanisme d'un disjoncteur miniature à boîtier isolant.

Publication

EP 0213979 A1 19870311 (FR)

Application

EP 86401474 A 19860703

Priority

FR 8511839 A 19850731

Abstract (en)

1. Thermomagnetic trip release (10), associated with an opening mechanism of a molded insulated case miniature circuit breaker, comprising : - a first thermal trip release with a bimetallic strip (14) sensitive to overload currents, - a second electromagnetic trip release for protection against short-circuit currents, comprising a control coil (34) electromagnet (16), made up by helical winding of a deformable conductor having a preset rigidity, - and an adjustment device (52) of the thermal tripping threshold of the first trip release, characterized in that the coil (34) of said electromagnet is extended by a tail (44), arranged as an adjustable support part of the bimetallic strip (14), the foot (48) of the latter being inserted by soldering between said tail (44) and an electrical connection means (76, 80) with a contact pad, to cause the current to flow thickness-wise through the foot (48) of the bimetallic strip (14), and that the tail (44) comprises a hinge (60) between the junction point of the foot (48) of the bimetallic strip (14) and the coil (34), in such a way as to allow a relative movement of one part of said tail (44) due to the action of the thermal tripping threshold adjusting device (52), the other part, connected to the coil (34) remaining appreciably stationary.

Abstract (fr)

L'invention est relative à un déclencheur magnétothermique, équipé d'une bilame 14 et d'un électro-aimant 16 à bobine 34, contituée par enroulement hélicoïdal d'un conducteur déformable ayant une rigidité prédéterminée. La bobine 34 est prolongée par une queue (44) agencée en organe de support réglable de la bilame 14, dont le pied 48 est traversé par le courant dans le sens de l'épaisseur. La queue 44 comporte une charnière 60 entre le point de jonction 49 du pied 48 et la bobine 34, de manière à autoriser un déplacement relatif d'une partie 50 de la queue 44 sous l'action de la vis 54 de réglage du seuil de déclenchement thermique, l'autre partie reliée à la bobine 34 restant sensiblement immobile. Application : disjoncteur miniature à basse tension.

IPC 1-7

H01H 71/40

IPC 8 full level

H01H 71/40 (2006.01); **H01H 71/24** (2006.01)

CPC (source: EP)

H01H 71/40 (2013.01); **H01H 71/2463** (2013.01); **H01H 71/2481** (2013.01)

Citation (search report)

- [A] FR 2262396 A1 19750919 - OTTERMILL LTD [GB]
- [A] DE 597445 C 19340525 - SCHIELE & BRUCHSALER IND
- [AD] FR 2344949 A1 19771014 - MERLIN GERIN [FR]
- [A] DE 1463684 A1 19690306 - STOTZ KONTAKT GMBH
- [A] EP 0007283 A1 19800123 - MERLIN GERIN [FR]

Cited by

CN100377270C; DE4309197A1; EP1096529A1; CZ300253B6

Designated contracting state (EPC)

AT BE CH DE GB IT LI SE

DOCDB simple family (publication)

EP 0213979 A1 19870311; **EP 0213979 B1 19901010**; AT E57445 T1 19901015; DE 3674867 D1 19901115; FR 2585877 A1 19870206; FR 2585877 B1 19871023; ZA 865159 B 19870225

DOCDB simple family (application)

EP 86401474 A 19860703; AT 86401474 T 19860703; DE 3674867 T 19860703; FR 8511839 A 19850731; ZA 865159 A 19860710