

Title (en)
MINIATURE CIRCUIT BREAKER

Title (de)
MINI-SCHUTZSCHALTER

Title (fr)
DISJONCTEUR MINIATURE

Publication
EP 4117010 A1 20230111 (EN)

Application
EP 21765252 A 20210212

Priority
• CN 202010152847 A 20200306
• CN 2021076633 W 20210212

Abstract (en)
A miniature circuit breaker comprises a housing and a handle, wherein an overload protection device and an operating mechanism connected to a moving contact are arranged in the housing; the overload protection device includes a temperature control assembly equipped with a bimetal sheet; an incoming wire connecting terminal connected to the moving contact is arranged on one side, close to the moving contact, inside the housing; a static contact that cooperates with the moving contact is arranged on one side of the moving contact, and the temperature control assembly is arranged on the other side of the moving contact; when overloaded, the temperature control assembly drives a temperature control protection device arranged on the housing to trigger the circuit breaker to trip; the temperature control protection device includes a partition plate and a thermal tripping rod, wherein the partition plate separates the moving contact and the thermal tripping rod in two different planes; and the temperature control assembly includes a bimetal sheet and a current-carrying conductor. When the circuit breaker is overloaded, a movable end of the bimetal sheet drives the thermal tripping rod to rotate to trigger the circuit breaker to trip. According to the miniature circuit breaker of the present invention, the length of the current-carrying conductor of the temperature control assembly is shortened, which reduces the internal resistance and heat generation, thereby avoiding a damage to the parts caused by the overheating of the temperature control assembly.

IPC 8 full level
H01H 71/16 (2006.01); **H01H 71/02** (2006.01)

CPC (source: CN EP)
H01H 71/0207 (2013.01 - CN); **H01H 71/0221** (2013.01 - EP); **H01H 71/16** (2013.01 - CN EP); **H01H 71/505** (2013.01 - EP);
H01H 71/526 (2013.01 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4117010 A1 20230111; **EP 4117010 A4 20240410**; AU 2021229961 A1 20220825; AU 2021229961 B2 20230817;
CN 113363120 A 20210907; WO 2021175113 A1 20210910; ZA 202208519 B 20230329

DOCDB simple family (application)
EP 21765252 A 20210212; AU 2021229961 A 20210212; CN 202010152847 A 20200306; CN 2021076633 W 20210212;
ZA 202208519 A 20220729