

Title (en)
LOW-VOLTAGE CIRCUIT BREAKER

Title (de)
NIEDERSpannungsleistungsschalter

Title (fr)
Disjoncteur basse tension

Publication
EP 3837709 A1 20210623 (DE)

Application
EP 18785861 A 20180927

Priority
EP 2018076268 W 20180927

Abstract (en)
[origin: WO2020064109A1] The invention relates to a low-voltage circuit breaker, comprising: at least one current sensor for determining the magnitude of the electric current of a conductor of the low-voltage circuit breaker, which conductor is associated with the current sensor; at least one electromechanical switching unit for connecting and disconnecting at least two electrical contact points, at least one of which can be moved in such a way that in a first switching position of the movable contact point two contact points are connected to one another and in a second switching position the contact points in question are not connected to one another; at least one electronic switching unit having a semiconductor switching element, which electronic switching unit is electrically conductive in a first switching state and electrically blocking in a second switching state and is connected electrically in parallel with the electromechanical switching unit; an electronic tripping unit, which is connected to the current sensor, the electronic switching unit and the electromechanical switching unit and which is designed in such a way that, when current and/or current/time-period limit values of the conductor are exceeded, first the electromechanical switching unit is opened and then the electronic switching unit is blocked. The electromechanical switching unit is designed as a vacuum switch, in the case of which the contact points are in a vacuum, and a piezoelectric actuator is provided for changing the switching position.

IPC 8 full level
H01H 33/666 (2006.01); **H01H 9/54** (2006.01); **H01H 57/00** (2006.01)

CPC (source: EP US)
H01H 1/0203 (2013.01 - US); **H01H 9/542** (2013.01 - EP US); **H01H 9/548** (2013.01 - EP US); **H01H 33/666** (2013.01 - EP US); **H01H 71/127** (2013.01 - US); **H01H 57/00** (2013.01 - EP); **H01H 2009/544** (2013.01 - EP US)

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

DOCDB simple family (publication)
WO 2020064109 A1 20200402; CN 112789702 A 20210511; CN 112789702 B 20240920; EP 3837709 A1 20210623; US 11521814 B2 20221206; US 2022005659 A1 20220106

DOCDB simple family (application)
EP 2018076268 W 20180927; CN 201880098043 A 20180927; EP 18785861 A 20180927; US 201817279176 A 20180927