

Title (en)
CIRCUIT BREAKER DEVICE AND METHOD

Title (de)
SCHUTZSCHALTGERÄT UND VERFAHREN

Title (fr)
DISJONCTEUR ET PROCÉDÉ

Publication
EP 4241291 A1 20230913 (DE)

Application
EP 21844264 A 20211221

Priority

- DE 102020216416 A 20201221
- EP 21216099 A 20211220
- EP 2021087081 W 20211221

Abstract (en)
[origin: WO2022136424A1] The invention relates to a circuit breaker device for a low-voltage circuit comprising a mechanical isolating contact unit (MK) which is connected in series with an electronic disconnection unit (EU). The mechanical isolating contact unit (MK) can be switched by opening contacts to prevent current flow or closing the contacts for current flow in the low-voltage circuit. The electronic disconnection circuit (EU) can be switched by semiconductor-based switching elements into a high-resistance state of the switching elements to prevent current flow or into a low-resistance state of the switching elements for current flow in the low-voltage circuit. The magnitude of the voltage of the low-voltage circuit is determined such that instantaneous voltage values are available. The magnitude of the current of the low-voltage circuit is determined such that instantaneous current values are available. If the amount of the instantaneous current value exceeds at least one current threshold value, prevention of the current flow of the low-voltage circuit is initiated. The at least one current threshold value is adjusted according to the magnitude of the voltage of the circuit breaker device.

IPC 8 full level
H01H 9/54 (2006.01)

CPC (source: EP US)
H01H 9/547 (2013.01 - EP US); **H01H 9/548** (2013.01 - EP US); **H01H 71/125** (2013.01 - US)

Citation (search report)
See references of WO 2022136424A1

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)
WO 2022136424 A1 20220630; EP 4241291 A1 20230913; US 2024047152 A1 20240208

DOCDB simple family (application)
EP 2021087081 W 20211221; EP 21844264 A 20211221; US 202118258609 A 20211221