

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**

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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.

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

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