Title (en)

CIRCUIT BREAKER AND METHOD

Title (de)

SCHUTZSCHALTGERÄT UND VERFAHREN

Title (fr)

DISJONCTEUR ET PROCÉDÉ

Publication

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Application

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Abstract (en)

[origin: WO2023052146A1] The invention relates to a circuit breaker for protecting an electric low-voltage circuit, having: - the function of ascertaining the level of a differential current of the low-voltage circuit, - a mechanical separating contact unit so that an opening function of contacts can be switched in order to prevent a current flow or a closing function of the contacts can be switched for a current flow in the low-voltage circuit, and - an electronic interruption unit which is connected to the mechanical separating contact unit in series on the circuit side and which, as a result of semiconductor-based switch elements, can be switched to a high-ohmic state of the switch elements in order to prevent a current flow or a low-ohmic state of the switch elements for a current flow in the low-voltage circuit, wherein - the ascertained level of the differential current is compared with a differential current threshold and if the current threshold is exceeded, a process for preventing the current flow in the low-voltage circuit is initiated, and - while the contacts of the circuit breaker are closed and the electronic interruption unit is in the low-ohmic state, the electronic interruption unit is switched to the high-ohmic state when a voltage-reduced state of the low-voltage circuit is initiated, and the electronic interruption unit is switched back to the low-ohmic state after the voltage-reduced state is discontinued.

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