Title (en)

CIRCUIT BREAKER AND METHOD

Title (de)

SCHUTZSCHALTGERÄT UND VERFAHREN

Title (fr)

DISJONCTEUR ET PROCÉDÉ

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Application

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Abstract (en)

[origin: WO2023052041A1] The invention relates to a circuit breaker for protecting an electric low-voltage circuit, comprising: - a housing with at least one grid-side connection and a load-side connection, and - a mechanical separating contact unit which is connected to an electronic interruption unit in series, wherein - the mechanical separating contact unit is paired with the load-side connection, and the electronic interruption unit is paired with the grid-side connection, - the mechanical separating contact unit can be switched by opening contacts in order to prevent a current flow or by closing the contacts for a current flow in the low-voltage circuit, - as a result of semiconductor-based switch elements, the electronic interruption unit can be switched to a high-ohmic state of the switch elements in order to prevent a current flow or to a low-ohmic state of the switch elements for a current flow in the low-voltage circuit, - the level of the current in the low-voltage circuit, in particular between the grid-side phase conductor connection and the load-side phase conductor connection, is ascertained, - a process for preventing a current flow in the low-voltage circuit is initiated if current thresholds and/or current/time thresholds are exceeded, and - while the contacts of the mechanical separating contact unit are closed and the electronic interruption unit is switched to a high-ohmic state, the electronic interruption unit is switched to a low-ohmic state for a first duration in order to check the functionality of the circuit breaker.

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