

Title (en)
CIRCUIT BREAKER DEVICE AND METHOD

Title (de)
SCHUTZSCHALTGERÄT UND VERFAHREN

Title (fr)
DISPOSITIF ET PROCÉDÉ DE DISJONCTEUR

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Abstract (en)
[origin: WO2023052177A1] The invention relates to a circuit breaker device for protecting an electrical low-voltage circuit, said circuit breaker device comprising: - the function of ascertaining the level of the current of the low-voltage circuit, - a mechanical separating contact unit which can be operated by a mechanical handle such 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, - 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 to a low-ohmic state of the switch elements for a current flow in the low-voltage circuit, - wherein the ascertained level of the current is compared with current thresholds and, if the current thresholds are exceeded, a process for preventing the current flow in the low-voltage circuit is initiated. According to the invention, when the contacts of the circuit breaker device 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. After the voltage-reduced state is discontinued, the electronic interruption unit is switched back to the low-ohmic state.

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