

Title (en)

CIRCUIT BREAKER AND METHOD FOR TRIGGERING A CIRCUIT BREAKER, PARTICULARLY A LOW VOLTAGE CIRCUIT BREAKER

Title (de)

LEISTUNGSSCHALTER UND VERFAHREN ZUM AUSLÖSEN EINES LEISTUNGSSCHALTERS, INSBESONDERE EINES NIEDERSpannungsLEISTUNGSSCHALTERS

Title (fr)

DISJONCTEUR DE PUISSANCE ET PROCÉDÉ POUR LE DÉCLENCHEMENT D'UN DISJONCTEUR DE PUISSANCE, EN PARTICULIER D'UN DISJONCTEUR DE PUISSANCE BASSE TENSION

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Application

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Abstract (en)

[origin: US2010061029A1] In one embodiment of the present invention, a circuit breaker and a method for triggering a circuit breaker are disclosed, particularly a low voltage circuit breaker, including an electronic overload trigger, particularly for the protection against a short circuit, wherein the current is compared to a predetermined limit current and evaluated and the circuit breaker is triggered by the overload trigger, in case a short circuit is present according to the evaluation. In order to be able to reliably detect short circuits, the current is sampled with a predetermined sampling frequency and digitized. The wavelet coefficients of at least two segmentation levels are calculated for a predetermined number of digital current values in direct succession via a wavelet transformation. At least two wavelet coefficients, that is, one wavelet coefficient per segmentation level, are compared quantitatively to each other if the last of the current values in direct succession is larger than the limit current. The circuit breaker is triggered if the wavelet coefficient of a higher segmentation level is larger than the wavelet coefficient of a lower segmentation level.

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