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Abstract

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Electronic trip device comprising a capacitor for power supply of a trip coil

The trip device comprises a system-powered power supply circuit comprising a capacitor for power supply of a trip coil. When the trip device is powered on, the capacitor charges and its voltage (V_1) is regulated (t_1 - t_2) according to a first reference voltage (19V) sufficient to activate the trip coil if necessary. After a preset period (T), regulation of the voltage at the terminals of the capacitor is performed (t_2 - t_3) according to a second reference voltage (10V), lower than the first voltage. The reference voltage reverts to the first value during the same preset period when (t_3) the measured current reaches a preset threshold, which constitutes an indication of the presence of a fault that will lead to tripping being required. The capacitor is therefore generally charged at a lower voltage than that which is necessary for tripping, thus enabling its size to be reduced.

(Figure 4a-4b)