

Title (en)

Method and device for driving an electromagnetic switch

Title (de)

Verfahren und Vorrichtung zur Ansteuerung eines elektromagnetischen Schalters

Title (fr)

Procédé et dispositif pour la commande d'un commutateur, électromagnétique

Publication

EP 0575792 B1 19960417 (DE)

Application

EP 93108985 A 19930604

Priority

DE 4219834 A 19920617

Abstract (en)

[origin: EP0575792A1] A device (1) is used for switching an electromagnetic switch (2) on in the correct phase in order to close its contacts (3) at the zero crossing of the mains AC voltage in the event of a resistive load. For this purpose, the device has a current measuring device for the current flowing through the magnet coil (5) of the electromagnetic switch (2), a measuring device for the time when the contacts (3) close and, furthermore, measuring devices (6, 7) for the mains voltage zero crossings and the mains voltage amplitude. In addition, an evaluation device is provided which is connected to the measuring devices and has a sequence controller (9) for determining a switching-on time for the electromagnetic switch, for closing its contacts in the region of a zero crossing of the mains AC voltage. The information items coming from the measuring devices are in this case processed in a suitable manner. In a calibration phase, switching-on times which are suitable for closing the contacts at the zero crossing are determined and stored for various operating parameters. These stored data are then available later in the operating phase, so that the electromagnetic switch (2) can always close its contacts (3) at the zero crossing of the mains AC voltage even in changing operating conditions. If the closing time of the contacts should be shifted beyond a preselectable tolerance from the zero crossing of the AC voltage in the operating phase, the switching-on time of the electromagnetic switch (2) can be suitably corrected, and this new value can be stored. <IMAGE>

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IPC 8 full level

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CPC (source: EP)

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Cited by

EP0686851A1; CN100337291C; CN102315043A; EP4156218A1; US6927959B2; US11830693B2; WO0197239A1

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