Title (en)

ELECTRONIC CONTROL FOR A SINGLE-PHASE SYNCHRONOUS MOTOR, SINGLE-PHASE SYNCHRONOUS MOTOR AND PROCESS FOR OPERATING IT

Title (de)

ELEKTRONISCHE STEUERUNG FÜR EINEN EIN-PHASEN-SYNCHRONMOTOR, EIN-PHASEN-SYNCHRONMOTOR UND VERFAHREN ZUM BETRIEB EINES EIN-PHASEN-SYNCHRONMOTORS

Title (fr)

SYSTEME DE COMMANDE ELECTRONIQUE POUR MOTEUR SYNCHRONE MONOPHASE, MOTEUR SYNCHRONE MONOPHASE ET PROCEDE DE FONCTIONNEMENT D'UN MOTEUR SYNCHRONE MONOPHASE

Publication

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Application

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Abstract (en)

[origin: WO9733364A1] According to the invention the electronic control has a power section (7) for a single-phase synchronous motor (2) with a permanent magnet rotor, in which there are means (1) for detecting the position of the permanent magnet rotor and means (3, 4, 5, 6, 7) for the control of at least one driving coil depending on the position of the permanent rotor. Thus a single-phase synchronous motor can be reliably started in a given direction of rotation without a commutator and thus powers of up to about 5 kW can be developed with high efficiency. This also facilitates self-synchronisation because the control regulates the windings in accordance with the detected position of the rotor, while it is possible to adapt the motor to an adjustable rated power on the user's side and the current operating conditions via the pulse height and/or width. The means for detecting the rotor position may be optical, magnetic and/or inductive, e.g. a Hall effect sensor.

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