

Title (en)

ELECTRONICALLY COMMUTATABLE MOTOR COMPRISING AN ELECTRONIC CONTROL UNIT

Title (de)

ELEKTRONISCH KOMMUTIERBARER MOTOR MIT EINER ELEKTRONISCHEN STEUEREINHEIT

Title (fr)

MOTEUR A COMMUTATION ELECTRONIQUE COMPRENANT UNE UNITE DE COMMANDE ELECTRONIQUE

Publication

EP 1216500 A1 20020626 (DE)

Application

EP 00965822 A 20000906

Priority

- DE 0003058 W 20000906
- DE 19944197 A 19990915

Abstract (en)

[origin: DE19944197A1] The invention relates to an electronically commutable motor whose exciting windings, via semiconductor output stages, can be controlled by an electronic control unit using PWM control signals. A specified value can be given beforehand to the control unit and the control unit transmits corresponding PWM control signals to the semiconductor output stages. The aim of the invention is to enable, already during the run-up phase, the identification of faults, which can lead to an overloading of the motor and of the electronic components thereof, and to prevent an overloading. To these ends, the invention provides that after the pre-assignment of the specified value and/or after switching on the control unit and/or the semiconductor output stages, the control unit transmits PWM control signals, which increase the rotational speed of the motor in a ramp-like manner, to the semiconductor output stages during a predetermined or predeterminable run-up time until the final drive of the semiconductor output stages that corresponds to the specified value is reached. In addition, the invention provides that, during the run-up time, a specified rotational speed which corresponds to the PWM control signals can be compared to the measured actual rotational speed of the motor, and that the control unit and/or the semiconductor output stages can be switched off if the actual rotational speed differs from the specified rotational speed by a predetermined or predeterminable difference in rotational speed.

IPC 1-7

H02P 6/20; **H02H 7/08**; **H02H 7/093**

IPC 8 full level

H02H 7/093 (2006.01); **H02P 6/20** (2016.01); **H02H 7/08** (2006.01)

CPC (source: EP KR US)

H02H 7/093 (2013.01 - EP KR US); **H02P 6/20** (2013.01 - EP US); **H02H 7/0816** (2013.01 - EP US); **H02H 7/0833** (2013.01 - EP US)

Citation (search report)

See references of WO 0120765A1

Designated contracting state (EPC)

DE ES FR GB IT

DOCDB simple family (publication)

DE 19944197 A1 20010322; EP 1216500 A1 20020626; JP 2003510005 A 20030311; KR 100752825 B1 20070829; KR 20020035597 A 20020511; US 6696804 B1 20040224; WO 0120765 A1 20010322

DOCDB simple family (application)

DE 19944197 A 19990915; DE 0003058 W 20000906; EP 00965822 A 20000906; JP 2001524224 A 20000906; KR 20027003372 A 20020314; US 8846202 A 20020729