

Title (en)

ELECTRONICALLY COMMUTATED ELECTRIC MOTOR FEATURING PREDICTION OF THE ROTOR POSITION, AND METHOD

Title (de)

ELEKTRONISCH KOMMUTIERTER ELEKTROMOTOR MIT EINER ROTORPOSITIONS-PRÄDIKTION UND VERFAHREN

Title (fr)

MOTEUR ÉLECTRIQUE À COMMUTATION ÉLECTRONIQUE AVEC PRÉDICTION DE LA POSITION DU ROTOR ET PROCÉDÉ CORRESPONDANT

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Application

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Abstract (en)

[origin: WO2011020681A1] The invention relates to an electronically commutated electric motor comprising a stator and an especially permanent-magnetic rotor. The electric motor also comprises a control unit which is effectively connected to the stator and is designed to generate control signals for commutating the stator in such a way that the stator can generate a rotating magnetic field in order to rotate the rotor. The electric motor further comprises at least one rotor position sensor which is designed to detect a position, especially an angular position, of the rotor and generate a rotor position signal representing the position of the rotor. The control unit is designed to generate the control signals in accordance with the rotor position signal. According to the invention, the control unit is designed to sample and quantize the rotor position signal and generate a digital predictive rotor position signal. The digital predictive rotor position signal forms a time-related data stream which corresponds to the sampled and quantized rotor position signal and includes at least one or a plurality of future rotor position values at later points in time than the rotor position signal.

IPC 8 full level

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