

Title (en)

METHOD FOR STARTING A BRUSHLESS D.C. MOTOR

Title (de)

VERFAHREN ZUM STARTEN EINES BUERSTENLOSEN GLEICHSTROMMOTORS

Title (fr)

PROCEDE POUR DEMARRER UN MOTEUR COURANT CONTINU SANS BALAIS

Publication

**EP 1459436 A2 20040922 (DE)**

Application

**EP 02794997 A 20021216**

Priority

- DE 0204582 W 20021216
- DE 10162380 A 20011219

Abstract (en)

[origin: WO03052919A2] The invention relates to a method for starting a brushless d.c. motor comprising a multi-phase stator winding. According to the invention, a plurality of current pulses is applied to the stator winding while the rotor is stationary, a current build-up period is measured in the stator winding for each current pulse until a current threshold has been reached and the rotor position is derived from the current build-up periods that have been measured. The aim of the invention is to obtain a controlled acceleration without the use of a sensor and to precisely determine the rotor position without using complex control technology. To achieve this, a plurality of test current pulses is successively applied to the stator winding in such a way that the test current pulses in the stator generate stator flow vectors across 360 DEG , which are electrically offset by identical angular increments. The current build-up period is measured in the aggregate current of the stator winding for each stator flow vector and the phase angle of the stator flow vector with the shortest current build-up period is determined as the rotor position.

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IPC 8 full level

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CPC (source: EP US)

**H02P 6/185** (2013.01 - EP US); **H02P 6/22** (2013.01 - EP US)

Citation (search report)

See references of WO 03052919A2

Citation (examination)

- US 6091222 A 20000718 - VERTEMARA CARLO [US], et al
- US 6100656 A 20000808 - EL-SADI ASHRAF I [US], et al

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