

TITLE OF INVENTION: DRIVING METHOD AND APPARATUS FOR BRUSHLESS ELECTRIC MOTOR, AND DEVICE

ABSTRACT

The present disclosure relates to the technical field of driving of electric motors. Provided are a driving method and apparatus for a brushless electric motor, and a device. The brushless electric motor comprises: a stator core, which comprises Z tooth groups spaced apart from each other in a first circumferential direction; a rotor, which comprises a magnetic ring having P poles, P being an even number; and X phase conductors, which are wound on the tooth groups to form coils, where $X \geq 2$, and $Z=P \times X$, wherein in the same phase conductor, the coils on two adjacent tooth groups have opposite winding directions in a second circumferential direction of the tooth groups, and are spaced apart by $X-1$ tooth groups. The driving method comprises: by means of first ends and second ends, which are independent of each other, of N phase conductors, providing N periodically changing drive signals for the N phase conductors, wherein the waveform of each drive signal in one period comprises a first waveform, the intensity of which is greater than 0, and a second waveform, the intensity of which is less than 0, where $1 \leq N \leq X$. In this way, by means of a simple control mode, a brushless electric motor can be driven to provide a relatively large torque.

Fig. 4A