

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

ABSTRACT

The present disclosure relates to the technical field of electric motor driving. Provided are a driving circuit for a brushless electric motor, a control method and apparatus therefor, and a device. The brushless electric motor comprises: a stator iron core, which comprises Z tooth groups arranged at intervals in a circumferential direction; a rotor, wherein the number of poles of a magnetic ring is P ; and wires of X phases, which are wound around the tooth groups to form coils, wherein $X \geq 2$, $Z = P \times X$, and in wires of the same phase, the winding directions of coils on two adjacent tooth groups in the circumferential direction of the tooth groups are opposite, and the tooth groups are spaced apart by $X-1$ tooth groups. The driving circuit comprises: X full-bridge circuits, wherein each full-bridge circuit comprises two half-bridge circuits connected in parallel between an input end and a grounding end of the driving circuit, each half-bridge circuit comprises two switches connected by means of a node, the two half-bridge circuits comprise first and second half-bridge circuits, a node of a first half-bridge circuit in an i -th full-bridge circuit is connected to a first end of a wire of an i -th phase, and a node of a second half-bridge circuit in the i -th full-bridge circuit is connected to a second end of the wire of the i -th phase.

FIG. 10A