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### (54) METHOD FOR PRE-POSITIONING ROTOR OF OUTDOOR FAN IN HIGH-SPEED COUNTER-ROTATION STATE BEFORE **OPERATION**

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#### ABSTRACT (57)

A method for pre-positioning a rotor of an outdoor fan in a counter-rotation state before operation includes: 1) during a counter-operation state, sending, by a microprocessor, a signal to the inverter circuit to turn off all upper electronic switching tubes and turn on all lower electronic switching tubes; 2) measuring a phase current of each phase coil winding in the stator assembly; 3) calculating a back electromotive force of each phase coil winding in the stator; 4) calculating a position angle of the rotor assembly; 5) checking if the phase current of each phase coil winding is all smaller than a preset threshold current; if not, return to 1); if yes, proceed to 6); and 6) calculating a resistance torque to stop the rotor assembly based on the position angle of the rotor assembly, and then stopping the rotor assembly to achieve pre-positioning of the rotor before starting.

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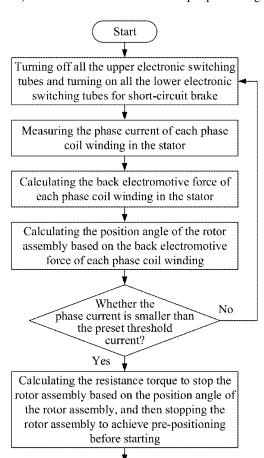
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Normal start procedure for running the motor

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