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(57)

ABSTRACT

A motor unit comprises a power supply, a diode, a capacitor, and a motor controller, where the motor controller comprises a switch unit and a control unit. The switch circuit includes a first upper-side switch, a first lower-side switch, a second upper-side switch, and a second lower-side switch. The control unit is configured to turn on the first upper-side switch and the second lower-side switch and turn off the first lower-side switch and the second upper-side switch. When an input voltage is less than a first reference voltage, the control unit is configured to turn off the first upper-side switch and the second lower-side switch. The motor controller may be configured to avoid an overvoltage problem.

