

Embedded System Using a PIC Microcontroller for Series Motor Four Quadrants Drive DC Chopper Controllers for the Application in Electrical Vehicles(Book chapter)

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Abstract:

The key success of an electric vehicle (EV) traction converter/inverter lies in the efficiency of its controller. In some complex systems such as an electric vehicle inverter/converter, the controller requires more than a single controller working together. The overall efficiency of such a controller much depends on its architecture and control strategy. This includes controller data distribution and communication between controllers. This paper describes a proposed four quadrants DC chopper (FQDC) controller architecture and a control strategy for controlling several modes of operation for EV applications. MATLAB/Simulink is used to establish the system under study and the results indicate that the proposed technique can be used.

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