Abstract

Pulse width modulation based on space vectors (SVPWM) technique has become the most popular and important PWM techniques for three phase voltage source inverters (VSI). In this paper, we present the analysis and realization of SVPWM for variable speed control of AC motor drives, employing Xilinx Spartan 3E FPGA device. The selection of zero vectors and space vector sequence are given and the possibilities of realization on FPGA are analyzed in this paper. A voltage source inverter with the proposed SVPWM was simulated in MATLAB/SIMULINK. The simulation and experimental results proved the proposed scheme.

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Index Terms

Power Electronics Control Devices

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FPGA
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