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# Inverter voltage space vector control

## Overview

What is space vector modulation?

Space vector modulation is responsible for generating pulse width modulated signals to control the switches of an inverter, which then produces the required modulated voltage to drive the motor at the desired speed or torque. Space vector modulation is also known as space vector pulse width modulation (SVPWM).

What is space-vector pulse width modulation (SVPWM)?

Space-vector (SV) pulse width modulation (PWM) technique has become a popular PWM technique for three-phase voltage-source inverters (VSI) in applications such as control of AC induction and permanent-magnet synchronous motors SVPWM technique enjoy an assortment of advantages such as high output quality, less THD, low distortion.

What is space vector PWM (SVPWM)?

Space Vector PWM (SVPWM) refers to a special switching sequence of the upper three power transistors of a three-phase power inverter. It has been shown to generate less harmonic distortion in the output voltages and/or currents applied to the phases of an AC motor and to provide more efficient use of dc input voltage.

What is the final step in the vector control process?

The final step in the vector control process is to derive pulse-width modulation signals for the inverter switches to generate 3-phase motor voltages. If the Space Vector Modulation (SVPWM) technique .

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