

## **SIMULATION OF 3 LEVEL VOLTAGE SOURCE INVERTER USING PWM**

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### **Abstract**

The power electronic device which converts DC power to AC power at required output voltage and frequency level is known as inverter. Inverters can be broadly classified into single level inverter and multilevel inverter. Multilevel inverter as compared to single level inverters have advantages like minimum harmonic distortion, reduced EMI/RFI generation and can operate on several voltage levels. A multi-stage inverter is being utilized for multipurpose applications, such as active power filters, static var compensators and machine drives for sinusoidal and trapezoidal current applications. This paper aims at the simulation study of three level voltage source inverters using sine wave modulation. The role of inverters in active power filter for harmonic filtering is simulated in MATLAB/SIMULINK.

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**Keywords:** pulse-width-modulation PWM, Voltage Source Inverters VSI, Current Source Inverters CSI, electromagnetic compatibility EMC, Common-mode CM

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