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Voltage source inverter control method

Overview

What is a voltage source inverter?

Voltage source inverters (VSIs) are commonly used in uninterruptible power supplies (UPS) to generate a regulated AC voltage at the output. Control design of such inverter is challenging because of the unknown nature of load that can be connected to the output of the inverter.

How to control the power flow of an inverter?

The first method is through the control of switching instance of inverter so as to produce a fundamental 50 Hz voltage in the output of inverter (Schauder, 1995; Mori, 1999). In this method, the power flow is controlled by adjusting the amplitude and phase of inverter output voltage relative to the line voltage.

What are voltage control techniques for inverters?

This is required to avoid saturation and ensure operation at constant flux density. The Voltage Control Techniques for Inverters can be affected either external to the Inverter Control or within it. The Voltage Control Techniques for Inverters can be done in two ways. (a) The variation of dc link voltage can be achieved in many ways.

How do I set up a voltage source inverter?

To get started: Confirm that no power source is connected to the design. Confirm that the output filter is correct for the mode that the device will run in. For example, voltage source inverter uses an LC filter. The L2 and L2N slot must be jumper wired as shown in Figure 11.

What control techniques are used in grid connected inverters?

This study presents the comparative evaluation of the performance of the two main control techniques for Grid Connected Inverters. Sinusoidal Pulse Width Modulation voltage controller and hysteresis current controller are considered

here. The main control innovations, determined by industrial applications, are presented.

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