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Title: Single-phase inverter overmodulation

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How a single-phase inverter works in over-modulation regime?

in a single-phase inverter working in over-modulation regime. The output voltage is generated forces this component in the output voltage close to zero. Other remaining higher harmonics can be attenuated more easily by using a smaller filter. Although the voltage gain of the fundamental wide inverter's working range.

How to reduce harmonic distortion in a single phase inverter?

For a single-phase inverter operating in the overmodulation region, an improved SPWM method is proposed in to eliminate the third harmonic. Thus, the total harmonic distortion is reduced and current quality is improved. Based on the PI controller with feedforward decoupling, the inverter is controlled.

Are single-stage three-phase grid-connected boost inverters effective?

Single-stage three-phase grid-connected boost inverters are recommended for better efficiency. In this paper,the effectiveness of a single-stage three-phase grid-connected boost inverteris investigated when its gain is extended by employing the over-modulation technique. The use of over-modulation is compared with third order harmonic injection.

Does over-modulation reduce ThD in a wide inverter?

Although the voltage gain of the fundamental harmonic component is lower at higher over-modulation,such a solution assures lower THDin the wide inverter's working range. The proposed SPWM procedure was validated experimentally. 1. Introduction

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