电网技术 2010, 34(5) 128-132 DOI: ISSN: 1000-3673 CN: 11-2410/TM



电力系统

# 矢量模式单周控制的三相双降压式并网逆变器

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**摘要：**

提出一种新颖的三相双降压式并网逆变器，该逆变电路克服了传统逆变器的直通问题。采用空间矢量算法与单周控制相结合的方法，将三相母线交流电压划分为6个区间，在每个区间建立单周控制模型。采用这种控制器的三相双降压式并网逆变器具有效率高、开关频率固定和可靠性高等优点。在分析、建模的基础上进行了仿真研究，仿真结果表明，该逆变器具有良好的动、稳态性能，能以单位功率因数向电网输电。

**关键词：**

## Three-Phase Dual-Buck-Type Grid-Connected Inverter Based on Space-Vector Algorithm and One-Cycle Control

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Abstract:

A novel three-phase dual-buck-type grid- connected inverter, in which the shoot-through problem in traditional inverters is overcome, is proposed. By means of combining space-vector algorithm with one-cycle control, the AC voltage of three-phase busbar is divided into six regions and for each region a one-cycle control model is built. The proposed three-phase dual-buck-type grid-connected inverter possesses such merits as high efficiency, fixed switching frequency and high reliability. On the basis of analysis and modeling, simulative research is performed, and simulation results show that the dynamic and steady state performances of the proposed inverter are satisfied and can transmit electric power to power grid under unity power factor.

Keywords:

**收稿日期** 2009-09-01 **修回日期** 2010-03-11 **网络版发布日期** 2010-05-13

DOI:

**基金项目**:

**通讯作者**: 庹元科

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