

عنوان مقاله:

An Adaptive Hysteresis Current Control for SAPF in a Grid Connected Photovoltaic System

محل انتشار:

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خلاصه مقاله:

In this paper, an adaptive hysteresis band current controller is proposed for Hysteresis Current Controller (HCC) in the grid connected photovoltaic (PV) system. The adaptive hysteresis band current controller, proposed by Bose for electrical machine drives, is adapted to active power filter (APF). The adaptive hysteresis band current controller changes the hysteresis bandwidth according to modulation frequency, supply voltage, dc capacitor voltage and reference current wave. The hysteresis band current controller determines the switching times of the shunt active power filter (SAPF). The results of the simulation study of the SAPF control technique presented in this paper is found quite satisfactory to compensate reactive and harmonic components of the local loads and inject generated active power of the photovoltaic cells into the grid. All simulation is done using MATLAB/Simulink

کلمات کلیدی:

Hysteresis band current controller; Shunt active power filter; Harmonic current compensation; grid connected photovoltaic; B4 inverter

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