

عنوان مقاله:

A Current Control Method of Hybrid Active Power Filter Based on Averaged Model Under Asymmetrical Conditions

محل انتشار:

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خلاصه مقاله:

A control method of a hybrid active power filter based on averaged model is proposed in this paper. A three-phase four-leg inverter and two parallel passive filters form the hybrid active power filter. Control system of the hybrid active power filter is based on switching functions extracted by the averaged model of the hybrid active power filter. The proposed improved control method is appropriate under asymmetrical source and non-linear loads conditions. The average load reactive power is compensated by the parallel passive filters and the variable reactive power is compensated by the inverter of the hybrid active power filter in this configuration. This paper analyzes the principles of the presented control method in detail. The proposed control method was simulated and the simulation results are provided to validate effectiveness of the presented control method.

کلمات کلیدی:

Hybrid active power filter, asymmetrical condition, averaged model, harmonic compensation, reactive power compensation

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