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عنوان مقاله:

A New Maximum Power Point Tracking Method For Photovoltaic System Under Partial Shading Conditions

محل انتشار:

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خلاصه مقاله:

A photovoltaic (PV) power generation system under partial shaded conditions (PSC) exhibits multiple power peaks in the power-voltage (P-V) characteristic curve and traditional optimization methods fail to detect the global maximum power point (GMPP). This paper proposes a hybrid intelligent to improve the maximum power point (MPP) tracking capability for PV system under partial shading condition. The key advantage of the proposed technique is the elimination of PI control loops using direct duty cycle control method. Furthermore, since the proposed method is based on optimized search method, it overcomes the common drawback of the conventional MPPT, i.e. To evaluate the idea, the algorithm is implemented on a boost converter and compared to the conventional MPPT methods. Simulation results indicate that the proposed method outperforms others method in terms of global peak (GP) tracking speed and accuracy under various partial shading conditions. Furthermore, it is tested using data of a tropical cloudy day, which includes rapid movement of the .passing clouds and partial shading

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