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Study of the MPP tracking algorithms: Focusing the numerical method techniques

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ABSTRACT

A comparative review between different algorithms for maximum power point (MPP) tracking is presented, particularly focusing Numerical Method (NM) techniques. This paper presents a wide range of efficient NM schemes which have been neglected by most of the MPPT review papers. As, NM techniques are one of the simplest and fastest tracking algorithms. These techniques offer advantages of exact MPP tracking, standalone applications, flexible searching step sizes and no steady state oscillations. In addition, many different MPPT schemes are discussed and compared with the NM techniques. There are many ways of grouping and categorizing the MPPT algorithms for the Photovoltaic (PV) Array. However, evaluation of the NM schemes in comparison with other techniques is provided effectively through analog and digital classification, in terms of implementation and circuitry involved. Therefore, a comparative review majorly focusing on the importance of NM schemes to track the MPP is presented in comparison with other techniques, through analog and digital classification.

Contents

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