

ANALYSIS OF P&O MPPT ALGORITHM FOR PV SYSTEM

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ABSTRACT

Among the different Non-conversion energy resources, the photovoltaic (PV) system that uses the solar energy to produce electricity is one of the renewable energy sources. It has a great potential and is developing fast compared to other renewable energies. Photovoltaic systems can be either stand-alone or connected to the utility grid. The disadvantage of this PV generation depends on atmospheric conditions such as solar irradiance and temperature. Maximum power point trackers (MPPTs) play an important role in photovoltaic (PV) power systems because they maximize the output power of a PV system for a given atmospheric condition so as to maximize the PV array efficiency. MPPT maintains the operating point at the maximum power point using a different MPPT algorithm. MPPT can minimize the overall photovoltaic (PV) system cost. For maximizing the output of a PV system, continuously tracking the maximum power point (MPP) is necessary.

KEYWORDS: Maximum Power Point Tracking (MPPT), Power Electronics, MPPT Efficiency, Photovoltaic (PV), Direct Current (DC), DC To DC Converter