

PERFORMANCE ANALYSIS OF CSI BASED PV SYSTEM CONNECTED TO GRID BY USING FUZZY LOGIC CONTROLLER

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ABSTRACT

This paper presents Fuzzy logic control based control scheme for current source inverter (CSI) based PV inverter which is used for a grid connected system. Generally voltage source inverters (VSI) for grid connected PV systems. But voltage source inverters cannot boost the voltage, so current source inverters which has the property of boosting capability is adopted for PV systems. The Research on current source inverters is still growing interest. This paper presents modeling of PV system and current source inverter. The proposed system is also tested under fault conditions. In addition to the above work conventional PI controller can be replaced with Fuzzy logic controller which has better performance than PI controller. The proposed system is simulated using MATLAB/SIMULINK and the results are shown.

KEYWORDS: Multi Level Inverters, Photovoltaic Cells, Medium Voltage Drives, Harmonic Analysis, Total Harmonic Distortion (THD)