

MULTILEVEL CONVERTERS USED FOR RENEWABLE DISTRIBUTED SYSTEMS

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ABSTRACT

A single phase grid connected converter is mainly used for low-power renewable distributed systems. The proposed converter architecture is based on the full-bridge topology. There are additionally two power switches and two diodes used. Charging and discharging of two capacitors are used to create the two added levels. Here, a specific pulse width modulation technique is used. It is used to balance the midpoint voltage of the capacitors. Pulse width modulation is nothing but changing on and off time period of a waveform without changing its frequency. The power loss comparison also takes place here. The harmonics are also reduced here. MPPT technique is used to obtain the maximum power.

KEYWORDS: DC-AC Conversion, Distributed Power Generation, MPPT Technique, Multilevel Converters, Midpoint Voltage Control