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THREE PHASE SINGLE STAGE THREE-THIRTEEN LEVEL AC-DC CONVERTER

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ABSTRACT

In this paper, three phase single stage three-thirteen level AC-DC converter is presented. Multilevel converters are used in high voltage and high power applications of industry field, This converter achieves power factor correction, output voltage regulation in a single stage of power conversion, and lower total harmonic distortions by using multilevel diode clamped inverter. Increase the number of levels, the synthesized output wave form has more steps, producing a very fine stair case wave and approaching very closely to the desired sine wave and thereby the harmonics decrease, the waveforms are of high quality with a THD approaching zero. Converter description, analysis and design considerations for the proposed converter are explained.

KEYWORDS: Three Phase Single Stage Three-thirteen Level AC-DC Converter, THD