

Reviews on Modulation Techniques and Multilevel Converter

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Abstract: *The multilevel converter, (MC) had been recommended for high- and medium-level power applications for decades. It is one of the most popular converters due to its ability to decrease the harmonic distortion in the output waveform without decreasing the converter power output. This paper presents the basic concept of four different types of multilevel converter: the neutral-point clamped, flying capacitor, cascaded H-bridge and modular. This paper also reviews five different modulation techniques for multilevel converters: pulse width modulation, space vector pulse width modulation, phase shifted carrier pulse width modulation, sinusoidal pulse width modulation and selective harmonic elimination pulse width modulation. In addition, recent publications regarding developments and improvements of fundamental concern to MCs and modulation techniques are reviewed in this paper. The implementation of MCs within renewable energy systems is also discussed here.*

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