SRI RAMAKRISHNA ENGINEERING COLLEGE, COIMBATORE
Department of Electrical and Electronics Engineering
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Design and Development of Modified SEPIC Converter for BLDC Drive

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Aim

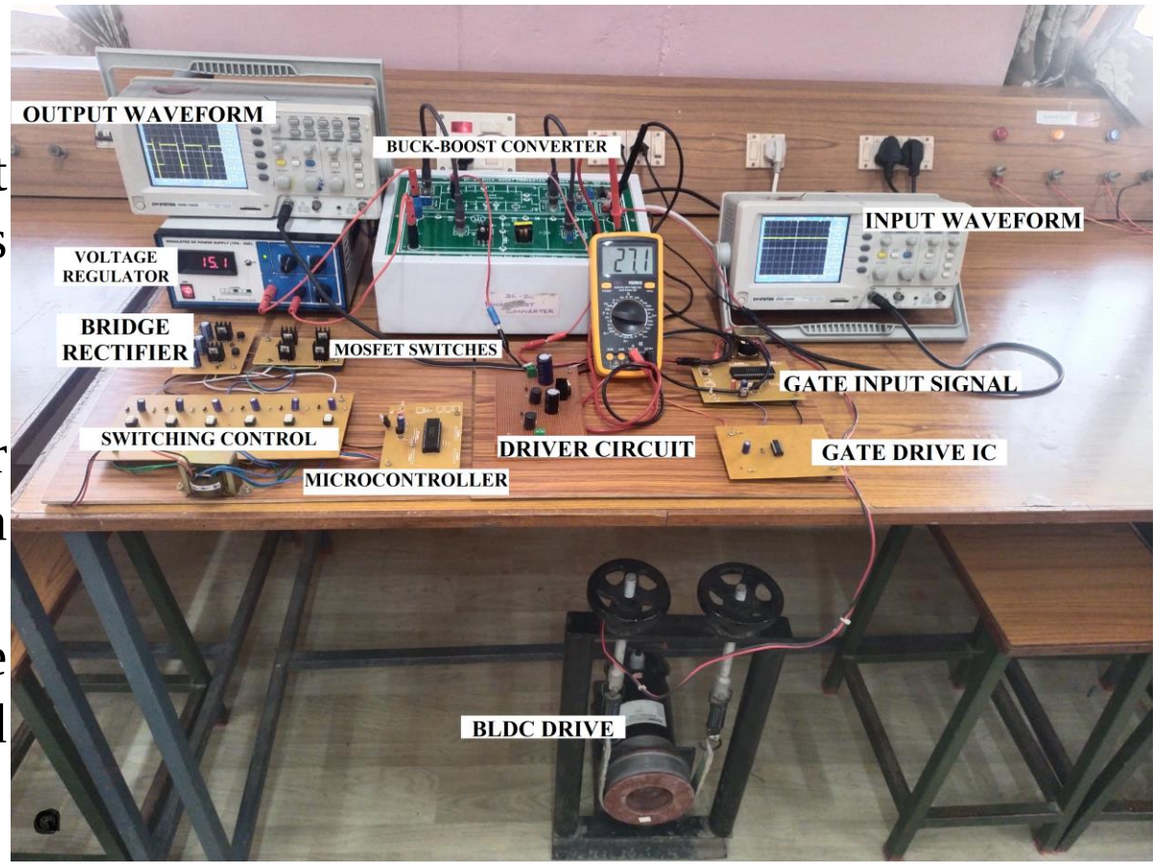
To analyze and prove modified SEPIC Converter is best suited for BLDC drive system by comparing with various converters.

Objective

- ✓ Design and develop modified SEPIC converter for BLDC drive system with increased potential and high power rating of applications.
- ✓ To prove the system has better efficiency, minimal ripple output, low harmonic distortion and high current and voltage.

Conclusion

Modified SEPIC Converter is designed & developed and is compared with various converters like Zeta, Cuk and Quasi-Z source converters. Modified SEPIC converter produces output voltage and output current as 41.2v and 41.12A respectively, it is 1.99 times of the voltage conversion ratio, output ripple is observed as 0.30% with an efficiency of 73.8%.



Experimental Setup & Output Waveforms