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ARDUINO BASED BUCK BOOST CONVERTER FOR EFFECTUAL SOLAR PANEL APPLICATIONS

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ABSTRACT

Recently, photovoltaic systems (PV) have been the most popular and promising technology in the field of Renewable Energy. But we know the solar irradiance is varying in nature this causes fluctuation in the output voltage with time. This is one of the major demerits of the PV System. Thus, here in this paper we propose a buck boost converter based on Arduino microcontroller to obtain constant output voltage by controlling the duty cycle of the gate pulse of the converter using PWM Techniques. The prototype of the system has been developed and tested and the performance of the system is verified. The system performance is verified in the simulation also. We obtained a constant 12V in both modes (buck and boost).

KEYWORDS: *Photovoltaic Systems (PV)*