

Solar Powered BLDC Portable Fan

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Abstract: *In the present time solar energy is at its booming stage compared to other sources, As it's the perfect alternative for all conventional sources required for electrical energy generation. This paper proposes a solar-powered BLDC Fan that is portable. A BLDC motor is a brushless DC motor which is like a synchronous electric Motor powered by direct-current (DC) electricity and it requires electronic commutation technique rather than a mechanical commutator because no brushes are used. Electronic commutation and speed control is done by using MOSFETs and Hall effect sensors. In BLDC motors, there are linear relationships between current to torque and voltage to rpm. Because of this linearity bldc portable Fans get an excellent opportunity to use the BLDC. This paper presents practical implementation of such a bldc motor for fan application along with the Solar powered facility and Portability, actual power measurements in comparison with conventional fans. Complete Electrical and the associated advantages and Applications of this solar powered BLDC portable fans are also presented.*

Keywords: BLDC Motor, Portable fans, electronic commutation, energy consumption, MPPT, MOSFETs, Arduino etc.

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