

عنوان مقاله:

Demonstrating the Performance of a Tethered-Drone with Payload Capacity and Communication Operations

محل انتشار:

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نویسنده:

Alireza Karkon - Noura Tech, CEO

خلاصه مقاله:

Tethered drones are unmanned aerial vehicles that use a cable to transfer power and data to the drone. Power transfer in these drones is crucial, but challenges arise depending on the distance between the power source and the drone. Solutions such as using cables with optimal diameter, high-efficiency switching transformers, and harmonic current filters should be used to increase power transfer hardness. In addition, the selection of appropriate cables, powerful motors, and lightweight materials such as carbon fiber and aluminum are important considerations in the design of tethered drones. The use of switching transformers are suggested as one of the best solutions for power transfer in tethered drones due to their ability to control harmonic currents and more precise terminal. This paper aims to provide practical and optimal solutions to the challenges in tethered drone power transfer.

کلمات کلیدی:

Tethered drones, Power transfer, Optimal design of tethered drone :

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