

# Development of Power Management System Device: An Energy Conservation and Safety

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**Abstract:** *This study aimed to evaluate the effectiveness of the proposed project, which is a development of power management system device. It focuses on the primary usage, functionality, applicability, durability and safety aspects of the project, as well as how it effectively assists people through innovative means. The project is tested out of 40 respondents that has knowledge regarding electricity, enough to understand the flow of the project its material used, functions, usage and how it works. Based on the comprehensive evaluation of the device the following key findings have emerged. First, the prototype exhibited exceptional functionality, earning an excellent rating. This indicates a high level of effectiveness in power management system that can detect electrical faults and the ability to react when high and low voltage occur. Second, the device exhibits versatility and adaptability, receiving high ratings for both residential and commercial applications. It effectively addresses specific needs, accommodates user requirements, and provides a safe and practical learning experience in the field of power management system. Third, the prototype was well-agreed by users, who were satisfied with its workability and the availability of expertise, materials, tools, and support resources. Fourth, the device was highly regarded by users for its durability, demonstrating strong resistance to deformation, high temperatures, and environmental factors. This resilient framework ensures the device longevity, making it suitable for long-term use. Fifth, the device was highly regarded by users for its emphasis on safety. By eliminating sharp edges, avoiding toxic materials, and incorporating safety features like adequate protection and clear instructions, the device prioritizes user well-being, making it suitable for educational environments.*

**Keywords:** Power Management system. Functionality, Durability, Safety

