IMPROVED POWER FACTOR CORRECTOR DEVICE WITH INTEGRATED MICROCONTROLLER BASED SWITCHING UNIT

A Project Study Presented to the Faculty of the

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ABSTRACT

Title: Improved Power Factor Corrector Device with Integrated Microcontroller Based Switching Unit

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The research study is all about power factor correction which affects the power consumption of every appliance in the household. Power Factor Correction involves controlling resistive, inductive and capacitive loads. Inductive loads consume more power and some of this power is being wasted. Correcting the power factor minimizes the power wasted by these loads and maximizing the potential of the appliances in the household.

The concept of the 'Improved Power Factor Corrector Device with Integrated Microcontroller Based Switching Unit' had undergone planning, designing, experimenting, troubleshooting and implementation. Since the research study requires a prototype, the researchers have designed the device that is applicable to

household use. The fields that are considered in conceptualizing and making the project are Electronics Engineering and Electrical Engineering. Since the research study is dealing with power consumptions, high voltages and currents, the researchers had studied and reviewed Electrical Engineering subjects such as Electrical Circuits. The research prototype will be automated and needs a good background on Microcontrollers and Electronic components. The subjects that the researchers had reviewed are Power Electronics, Industrial Electronics, Microcontrollers and Electronic Circuits.

The research study undergone processes to ensure project credibility. Data are gathered from experimentations using household appliances, the research prototype and the power saver sold in the market. The results are factual and had been evaluated by professional Electronics and Electrical Engineers.

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