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## APPROVAL AND DECLARATION SHEET

This project report titled **Development of Wireless Line Power Tapper** was prepared and submitted by **Muhammad Rubai'ya Bin Ahmad Shukri (081070606)** and has been found satisfactory in terms of scope, quality and presentation as partial fulfillment of the requirement for the **Bachelor of Engineering (Industrial Engineering)** in **Universiti Malaysia Perlis (UniMAP)**.

Checked and Approved by

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(Mr. Abdul Rahim B. Abdul Razak)  
Project Supervisor

School of Electrical System Engineering  
Universiti Malaysia Perlis

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## ABSTRAK

Wireless Line Power Tapper merupakan sumber tenaga bantuan untuk sebarang suis kawalan. Kebanyakan komponen elektronik memerlukan bekalan kuasa untuk berfungsi, bekalan kuasa biasa menerima kuasa menggunakan wayar dari sumber bekalan. Bekalan kuasa ini mendapat kuasa elektrik dengan cara penyadapan tanpa wayar. Wireless Line Power Tapper ini menggambarkan sebuah bekalan kuasa yang menghasilkan keluaran arus Terus (DC). Kabel yang merentasi litar bekalan kuasa ini digambarkan mempunyai nisbah belitan sebanyak 1 dan dikenali juga sebagai belitan primer. Berikutnya, belitan sekunder adalah daripada model bekalan kuasa ini. Voltan sekunder daripada belitan sekunder akan teraruh sekiranya belitan sekunder berhampiran dengan belitan primer. Dalam teori Mutual Induction, sekiranya dua gelung belitan wayar diletakkan pada jarak yang dekat menyebabkan terhasil medan magnet di antara satu sama lain, maka akan terhasil voltan pada belitan kedua. Oleh sebab itu, belitan terpencil pada lilitan ferromagnetic akan mempunyai beban aruhan sebagai penyekat arus Ulang-alik. Pada belitan primer, ia mempunyai voltan yang tinggi dan arus yang rendah akan terhasil voltan rendah arus yang tinggi pada belitan sekunder. Walaupun belitan sekunder mempunyai nisbah belitan sebanyak 20 lilitan, akan tetapi voltan yang terhasil masih dalam nilai yang rendah. Tujuan penghasilan projek ini adalah untuk menghasilkan bekalan kuasa DC modul yang menekan bekalan voltan dari sumber bekalan elektrik. Penyambungan litar ini ialah litar penerus, dimana ia akan menukarkan arus Ulang-alik kepada arus Terus. Modul ini bertindak sebagai bekalan kuasa untuk sebarang beban atau keluaran.

## ABSTRACT

Wireless Power Line Tapper is a source of energy assistance to any switch. Most electronic components require a power supply to function, the normal power supply to receive power from the mains supply. The power supply is obtained by tapping the power of wireless. Wireless Power Line Tapper describes a power supply that produces an output direct current (DC). Cable across a power supply circuit is described with the winding ratio of 1 and is also known as primary winding. Next, the secondary winding is the power of this model. Secondary voltage from the secondary winding is induced if the secondary winding is close to the primary winding. Mutual Induction In theory, if two-loop coil of wire placed at a short distance causes the magnetic field produced at each other, so will the resulting voltage on the windings. Therefore, an isolated winding on ferromagnetic coil will have the burden of blocking the induction as alternating current. In the primary windings, it has high voltage and low current to the resulting low voltage high current in the secondary winding. Although the secondary winding has a winding ratio of 20 turns, but the voltage produced is still low in value. The purpose of the production project was to produce DC power supply modules that reduce the supply voltage of electricity supply. Connecting this circuit is rectifier circuit, where it will convert alternating current to direct current. This module acts as a power supply for any costs or output.

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