FINAL YEAR PROJECT

MEI 1991

DIPLOMA IN ELECTRICAL ENGINEERING (POWER)

DEPARTMENT OF ELECTRICAL ENGINEERING

SCHOOL OF ENGINEERING

ITM, SHAH ALAM

TITLE :

# SPEED CONTROL OF SINGLE PHASE MOTOR

SUBMITTED BY :

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BADRUL ZAMAN ABDULLAH

## PREFACE

Bismillahi Rahmani Rahim

First of all thanks to the Almigthy Allah for making us able to complete the project and solved all the problems that were encountered.

For us the project that has been done doesn't just to qualified us to get our diploma. What we hope is that our project will give us familliar with various of application of electronic circuit theory,electronic device and components and electric machines.

As, we all know that human can't ran from mistake, so both of us are really sorry if that is a mistake in this report. We always except a good critic with all our heart. Lastly we like to thank to the contribution that have been given to us,

Wassalam.

ACKNOWLEDGEMENT

This project was carried out by the final year students of Diploma level to fulfill the partial requirement to obtain the diploma.

We are greatly indebt to whoever participated in the accomplishment of this project espeacially to our project advisor EN MOHAMAD FADIL SAIDON for his encouragement and sincere wish, who advise and assistant us throughout that bring about the success of our project. Our gratitude and acknowledgement are also due to all technicians espeacially to EN HAMDANI, for their help in providing the components and facilities for the construction and testing the project.

We also wish to express our appreciation to all those who have devoted every hours and leisure time, either directly or indirectly motivated us toward the successfulness of our project .

Thank You.

Sharifuddin B. Alaluddin.

Badrulzaman B. Abdullah.

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## 1.0 INTRODUCTION

A number of motor control systems have been develop over the years to take advantage of variable speeds available from the armature voltage control of DC motors.

A solid state electronic components is available to produce a varying DC voltage. So in order to give the most economical way to control the speed of single phase motor,here we use SCR controlled. These solid state electronic component usually provide manual adjustment for regulating the speed.

For this project the drive circuit is classified into fullwave. The SCR conduction angle is controlled by setting a potentiometer.

The component values for these project are those for 1/15 hp motor. in sizing components for higher horsepower ratings, the average steady state current and the stalled rotor current of the motor determine the current and power ratings of the SCRs, diodes, transformer and etc,

It should be noted that the above types of motor speed control axlend themselves to other types of resistive appliances provided that the power rating of the appliance does not exceed the power rating of the