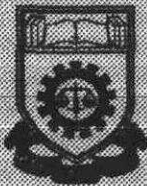


**COMPUTERISED SEPARATE SOURCE VOLTAGE TEST FOR
LOW POWER TRANSFORMER USING SOLID STATE DEVICES.**

Thesis presented in partial fulfilment for the award of the
Advanced Diploma in Electrical Engineering of
INSTITUT TEKNOLOGI MARA



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ABSTRACT

This project presents a computer based transformer testing for separate source voltage test. Separate source voltage test is a routine test required by Technical Committee i.e BSI, IEC for every transformer before despatch, to ensure that it is in accordance with the specification.

The reason for computer based is aimed to automate data collections for the transformer under testing . Most of the conventional testing is been done manually and the data taken are by observation. Hence this project offer an alternative design to data acquisition, control and monitor the system.

The proposed project is consists of a tranduser system to read supply current, supply voltage and voltage on the transformer under testing. An interface card that digitized the waveforms and provides interface with the computer.

The software written in C language uses available hardware to calculate and control the whole system. The system reads the supply voltage, supply current and voltage on the transformer under testing, then the system will read the voltage on the transformer under testing every two seconds until one minute.

The project has advantages like flexibility in programming and ease of use.

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1.0 INTRODUCTION

Man has done a lot of research on how to convert conventional testing to automated testing ever since the introduction to computer base. Unfortunately not many of this research are done in the field of electrical power engineering. There is company that produce transformer still used manual testing technique. This will however, will give them a certain acceptable data accuracy [3].

The method employed in this project is based on the data acquisition technique that has the capability to read all the data changes in the system and at the same instance its can control the necessary actions to avoid the system from damages.

1.1 Why Use A Personal Computer.

With the advent of fast Intel 8086 family of microprocessor like the Int 80286, Int i386, Int i486 and Int i486DX2 which operates at 16 MHz, 33 MHz, 50 MHz and 66 MHz respectively, open new horizons to the world of fast time data aquisition. Some of the advantages that we can foresee and used in this project by using the PC are as follows.

1.2 Portability

The interface card to be used with the PC can be used with any PC that operates at or faster than 20 MHz. The industrial standard IBM PC for the 1990s use at least the i386