INTERLOCKING SYSTEM FOR HIGH VOLTAGE LABORATORY

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ABSTRACT

This report is concerned with the development of designing a safety system for high voltage laboratory [high voltage test are essential requirement for making acceptance test for equipment that go into operation in the extra high voltage transmission system]. The system consists of two circuits, one to be used as the sensor to detect the moving object entering the test area and the other to protect the equipment under test from damage should there be any abnormality occurrence.

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CHAPTER 1

1.0 INTRODUCTION

The main purpose of this project is to provide a means of protecting the human from electrical shock, if someone enter the testing room while a test is being conducted, and protecting the equipments under test from abnormal operations such as overcurrent and overvoltage.

During any test is conducted, the entrance door to the test area should always be closed. Should any personnel enters the room during the time through the door, the testing equipments should be immediately turn-off. For this purpose, an infra-red detecting system is proposed to be installed on the door leaf. The system is to be connected to an alarm (warning indicator) and also to active another system which will turn the mains off to ensure proper isolation from the mains to the equipment.

Also, in the event of overcurrent or overvoltage, there should be a mean of isolating the circuits. The second part of this project is to design the isolating circuit.