

**FACULTY OF ELECTRICAL ENGINEERING**

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**PULAU PINANG**

**FINAL REPORT:**

**ALARM BASED TRIPPING MECHANISM**

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## **ABSTRACT**

Circuit breakers are designed as an automatic switch to stop the power flow if there is an over load. In this project, the circuit breaker designed to trip the load at 230V+10% and 230-6%. The rating of 230V+10% is considered as an overvoltage trip and 230-6% as low voltage. Overvoltage can damage the load if it is applied, whilst low voltage can make a load to perform under the expected rating. Finally, the circuit breaker is designed to protect the load from damage and under performance. The circuit is simulated by using the TINA software, to determine voltage to be supplied to each component. For the PCB design, a PROTEUS simulator is being used for the creation of PCB.

The result from the circuit breaker circuit is that the comparator will compare two inputs and will produce an output to turn ON the transistor so that the circuit will complete, thus activating the relay. As the relay is activated, it can be observed that the load will be shorted to earth in order to protect it from overvoltage and low voltage.

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