



Design and Implementation of Microcontroller-Based Multifunction Relay (TDOC)

Advisors:

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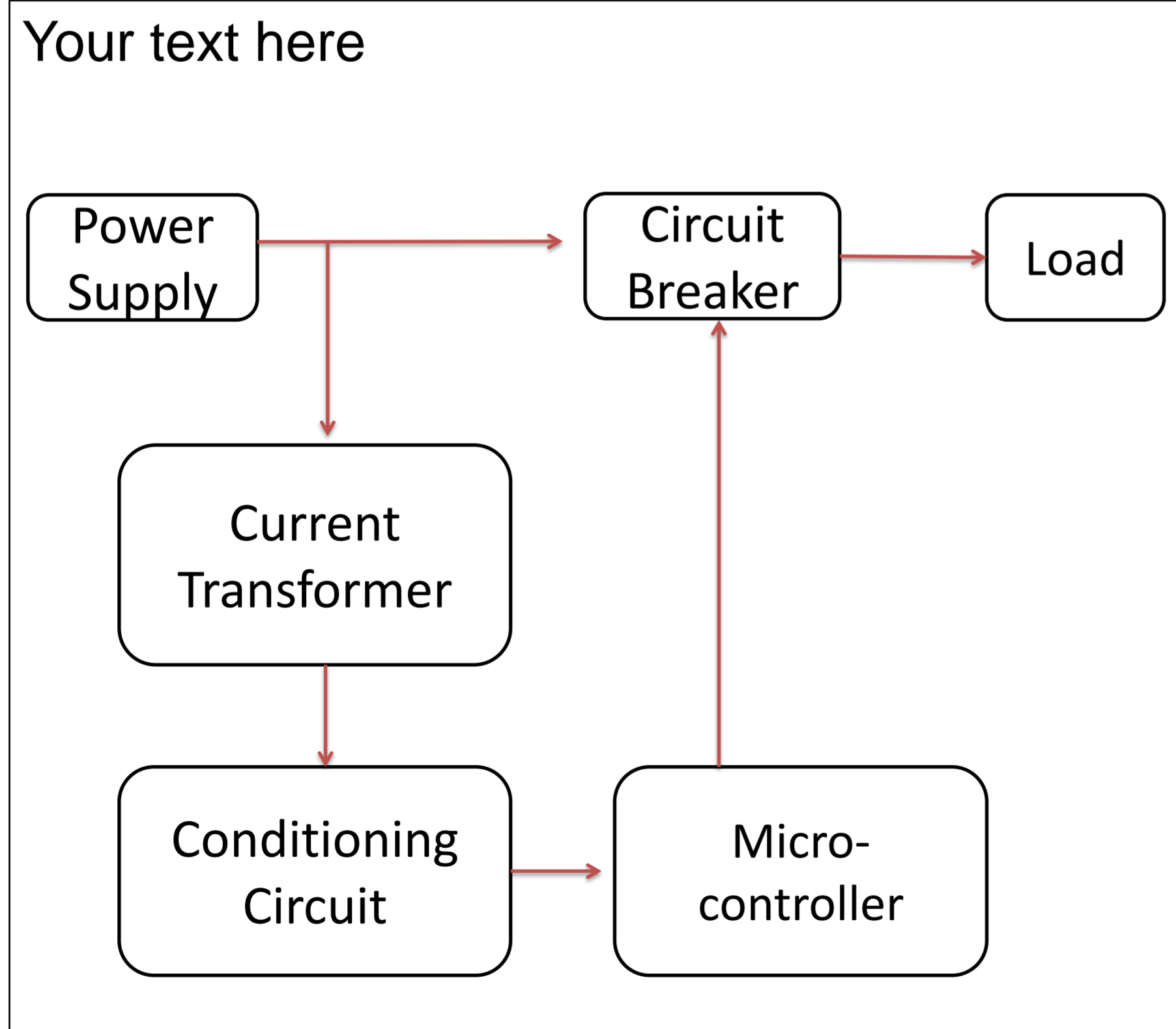
INTRODUCTION

Over current relays considered to be as a type of a protective relay which protect system equipment such as feeders, motors, generators and transformers.

OBJECTIVE

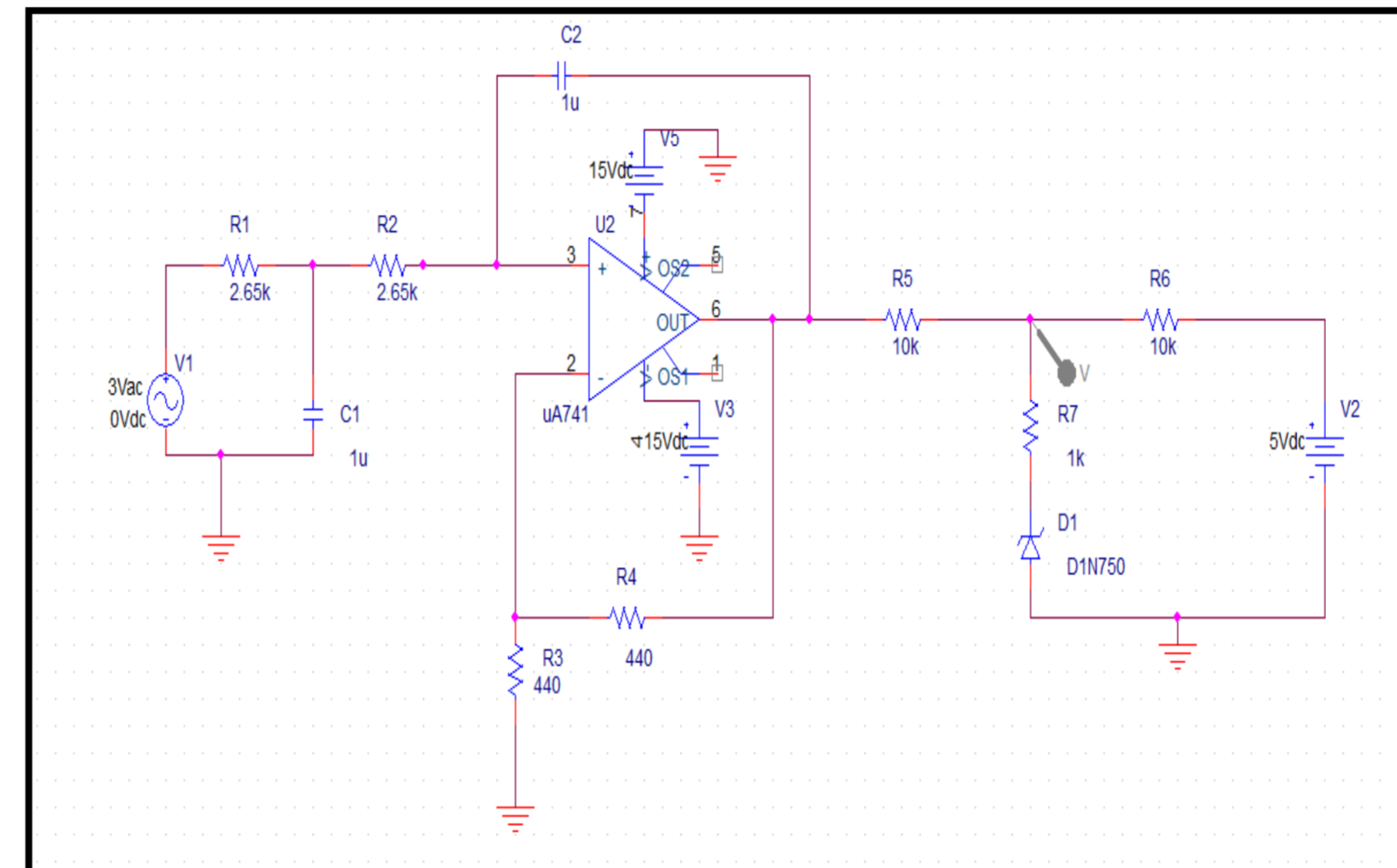
The purpose of this project is to design and implement a practical digital relay that protects the load from over current situation.

SYSTEM BLOCK DIAGRAM

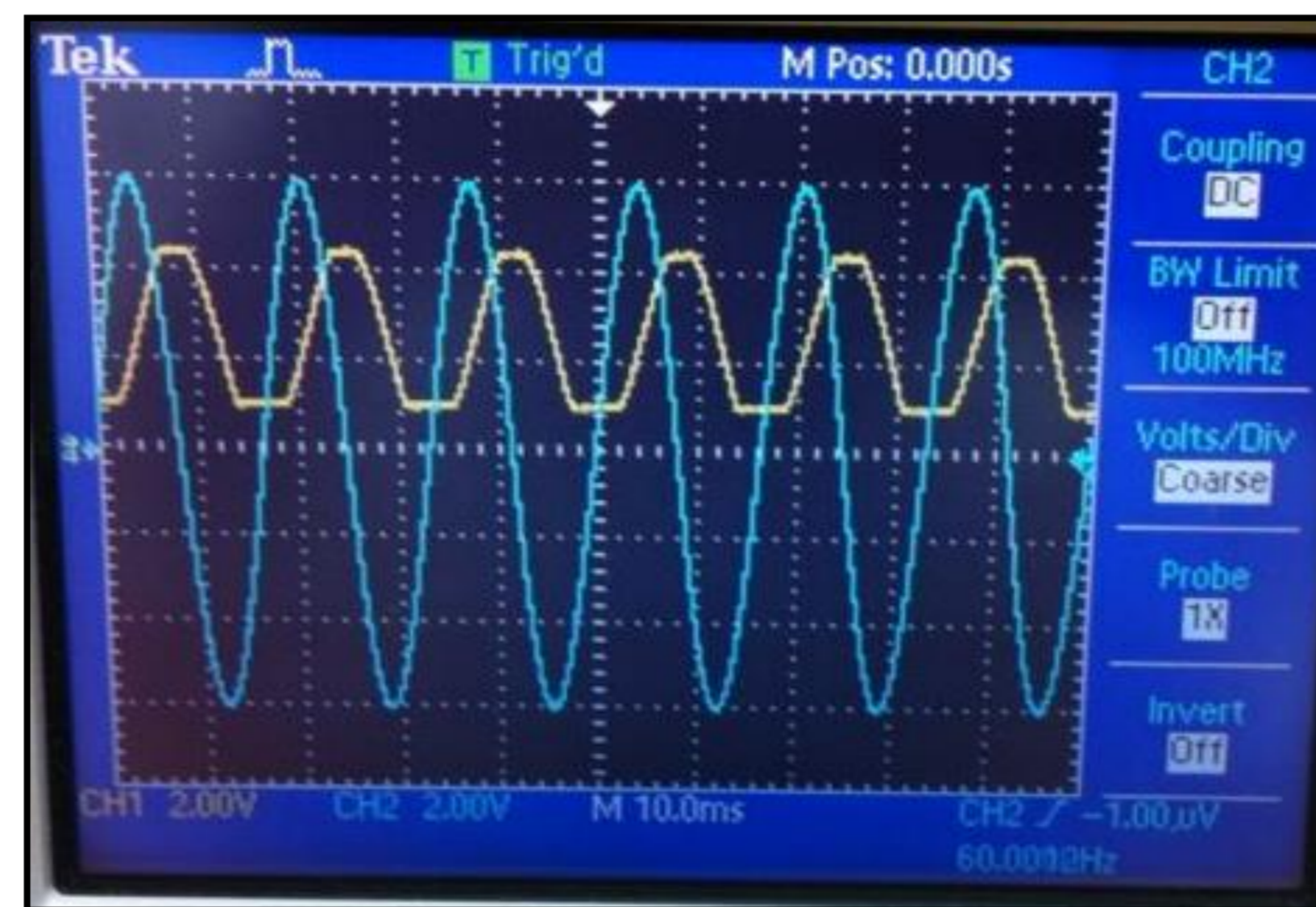


CONDITIONING CIRCUIT

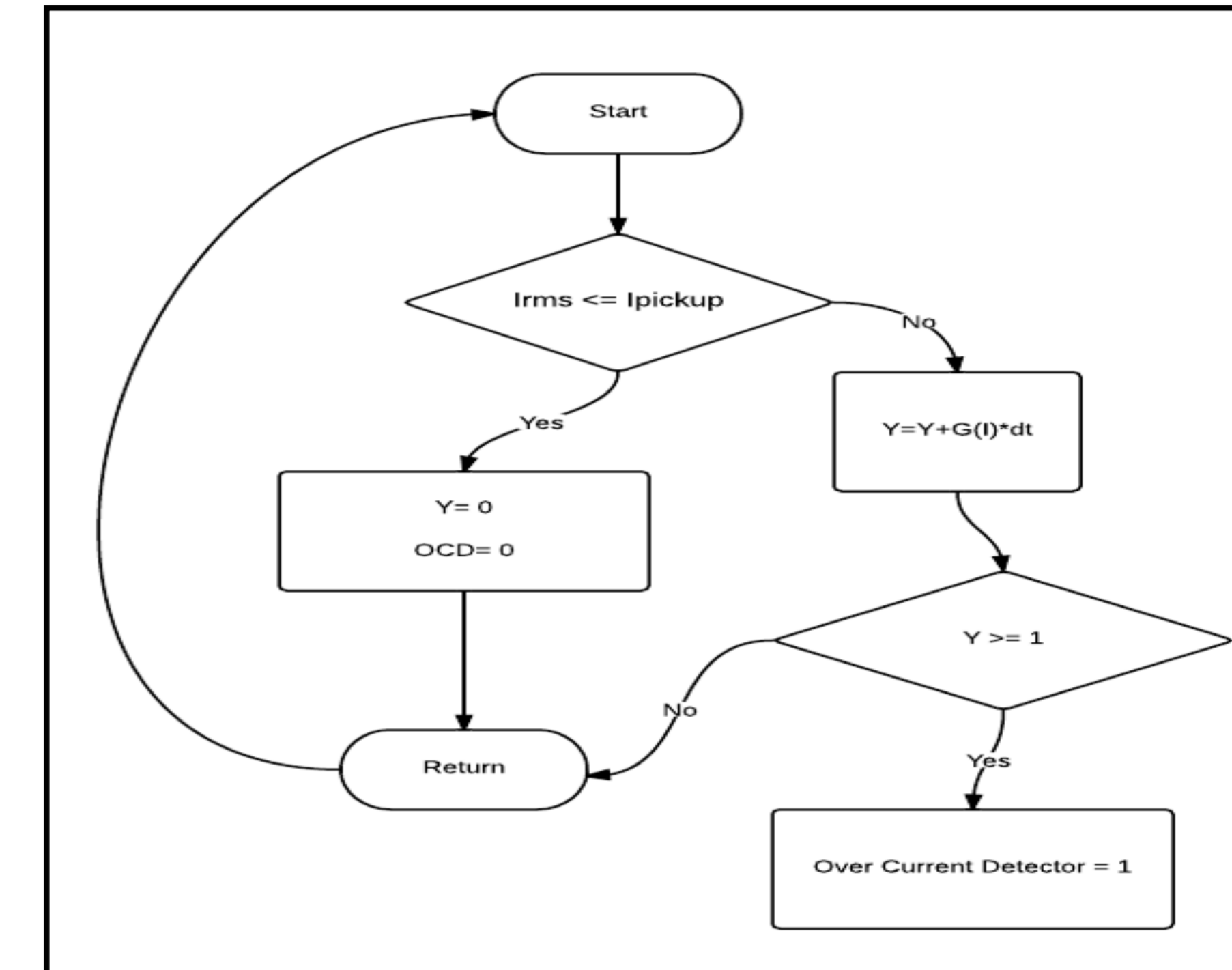
The main goals of the conditioning circuit in our project is to filter, shift and limit the signal to be suitable to the microcontroller as shown in the following figures:



CONDITIONING CIRCUIT OUTPUT

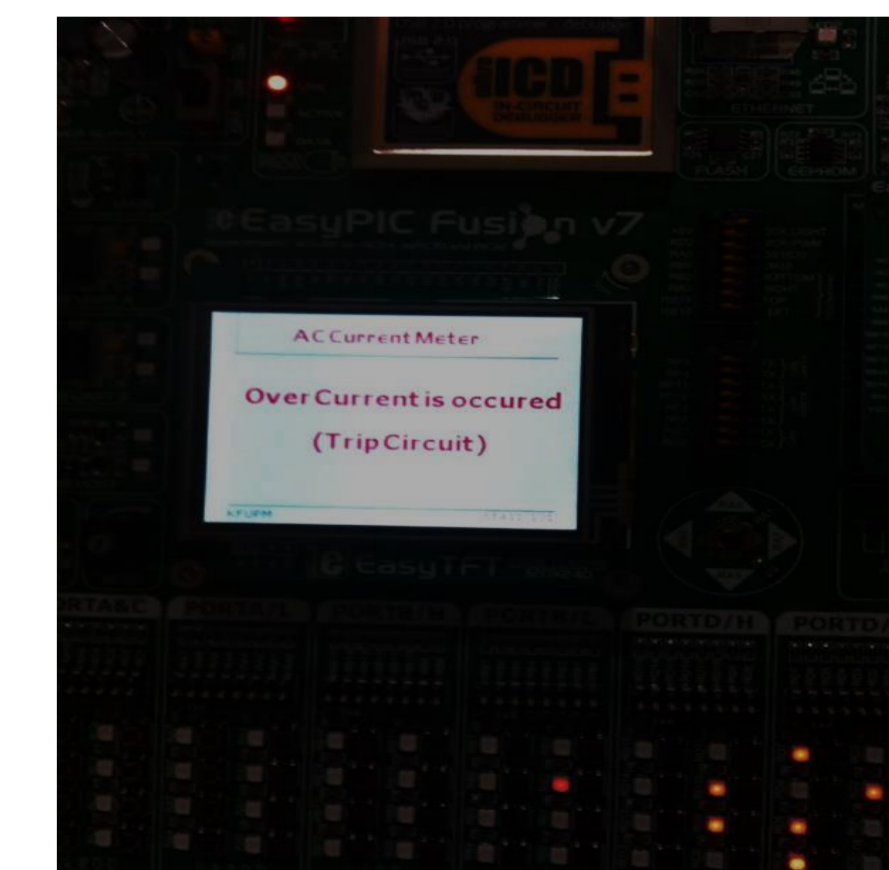


MATLAB ALGORITHM



RESULT

As decreasing the resistivity of the load , the current will increase until it reaches its pick up value. Then, the microcontroller will send a signal to trip the load.



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