

Earth techniques with line fault detection

<https://www.youtube.com/watch?v=BO12UkzclDU>

Earth fault or leakage of current is a very common problem in electrical circuits. This leads to unnecessary power loss. The purpose of this project is to develop a system that senses the earth fault in single-phasing system and alerts the user about it.

The aim of this project is to monitor the occurrence of phase/earth faults at different channels without any human interface. Here we make the fault by manual with the help of switches. This data read by microcontroller and displays that particular fault name on LCD and activate the buzzer along with LED indication for alerts.

The main controlling device of the project is PIC Microcontroller. Push buttons (fault switches), RED & GREEN LED, LCD display and Buzzer are interfaced to the microcontroller. To achieve this task microcontroller loaded program written in embedded C language.

Main features of this project:

1. Design a line fault detection circuit.
2. Fault indication using LEDs.
3. Fault alert using Buzzer.

Main blocks used in this project:

1. PIC Microcontroller.
2. Regulated power supply.
3. Switches.

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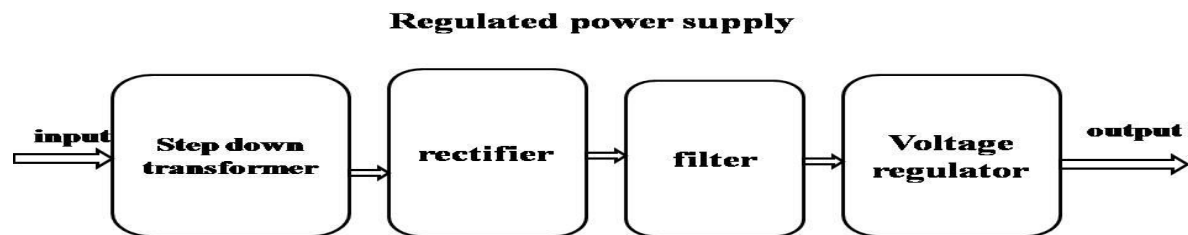
Ameerpet: #A-7, 2nd floor, Eureka court, Above KS bakers, Ameerpet, Hyderabad – 73.

4. Buzzer.
5. LCD display.
6. Crystal oscillator.
7. Reset button.
8. LED indicators.

Software's used in this project:

1. PIC-C compiler for Embedded C programming.
2. PIC kit 2 programmer for dumping code into Micro controller.
3. Express SCH for Circuit design.

Regulated power supply:



Block Diagram:



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