**FAULT RECOGNITION & RECTIFICATION IN AC TRANSMISSION**

**DESCRIPTION:**

The aim of the project is to design a fault non recognition protection system in ac transmission lines.

In this project we are using step-down transformers to mimic the conventional distribution transformers whose activeness is checked by the micro controller. Here we consider 2 transformers in this project. A bulb is connected at the input of each transformer to indicate that the transformer is active. And the output of the transformer is fed to a rectifier circuit and a regulator to check the output status of the transformer. Depending on the output of the transformer, we will be turning ON the corresponding relay to which the load will be connected, so that we can know the status of each and every transformer whether it is active or not. We interfaced an LCD to the controller on which the status of the power line will be displayed.

This project uses regulated 5V, 500mA power supply. Unregulated 12V DC is used for relay. 7805 three terminal voltage regulator is used for voltage regulation. Full wave bridge rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

**TECHNICAL SPECIFICATIONS:**

**HARDWARE:**

Micro controller : AT89x series

Crystal : 11.0592 MHz

Transformers : 6V step down

Load : AC bulb

Relay : Electromagnetic

LCD : HD44780

**POWER SUPPLY**

Transformer : 12V step down

Filter : 1000uf/25V

Voltage Regulator : 7805, 7812

**SOFTWARE:**

Keil IDE

UC flash

Proteus

**APPLICATIONS:**

* Power scheduling
* Power distribution

.**BLOCK DIAGRAM:**

MICRO controller

Power Supply

Relay

LOAD

Indicator

Transformer

Indicator

Transformer

Relay

LOAD

**POWER SUPPLY BLOCKDIAGRAM:**

Step down Transformer

Filter

Regulator

Output

Bridge Rectifier