

MAXIMUM DEMAND CONTROLLER & FAULT ALERTING FOR INDUSTRIES

In our project entitled with “**MAXIMUM DEMAND CONTROLLER & FAULT ALERTING FOR INDUSTRIES**”, we planned to analyze the maximum demand for the industries under load conditions and if it exceeds the allotted demand then the Electricity Board will insist penalty for that consumer. So we Engineers took this task into account and monitor the demand and controlling the same by using controllers. In addition to this, we have planned to analyze the fault in the industry such as open circuit, over load.

The project comprises of 2 sections.

1. Monitoring section.
2. Controlling section.

Monitoring Section:

This section consists of Digital Energy meter with current transformer, Signal conditioning circuit. This energy meter is interfaced to a microcontroller, Timer Module, LCD modules, Buzzer unit, Comparator circuit, and fuse failure circuit. The pulse output of Digital Energy meter is used to measure the realtime load on the system.

Controlling Section:

This section consist of Buffer circuit, driver circuit, relay module, Light loads, motor loads etc. The buffer circuit is used for isolation and

driver circuit for increasing the current capability required for the relay operation.

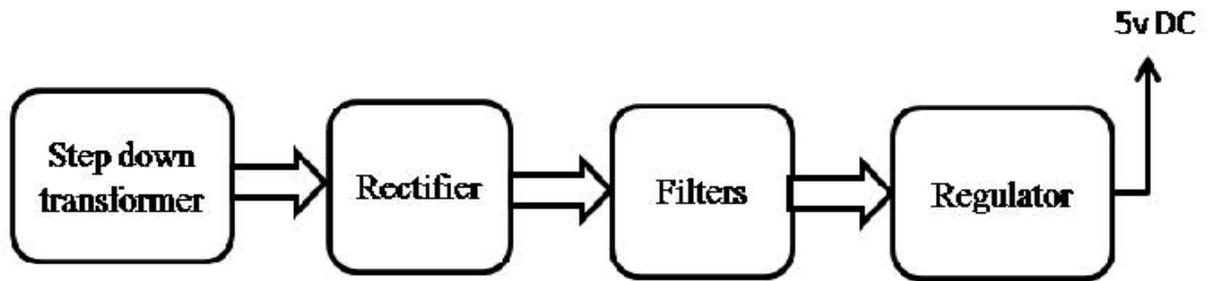
With this above circuit under monitoring section is given as input to Micro Controller and it will do all the manipulations and based on that it will give output in LCD module.

The LCD module displays the current load in KW, Circuit breaker status, Over load alert, MD alert, Open Circuit Status. An audible buzzer is played on crossing Maximum Demand Load.

The major building blocks of this project are:

1. Regulated Power Supply.
2. Microcontroller.
3. Crystal oscillator.
4. Electromagnetic Relay.
5. Relay Driver.
6. Digital Energy Meter.
7. LCD with driver.
8. Buzzer with driver.
9. LED indicators

Regulated Power supply:



MAXIMUM DEMAND CONTROLLER & FAULT ALERTING FOR INDUSTRIES

