

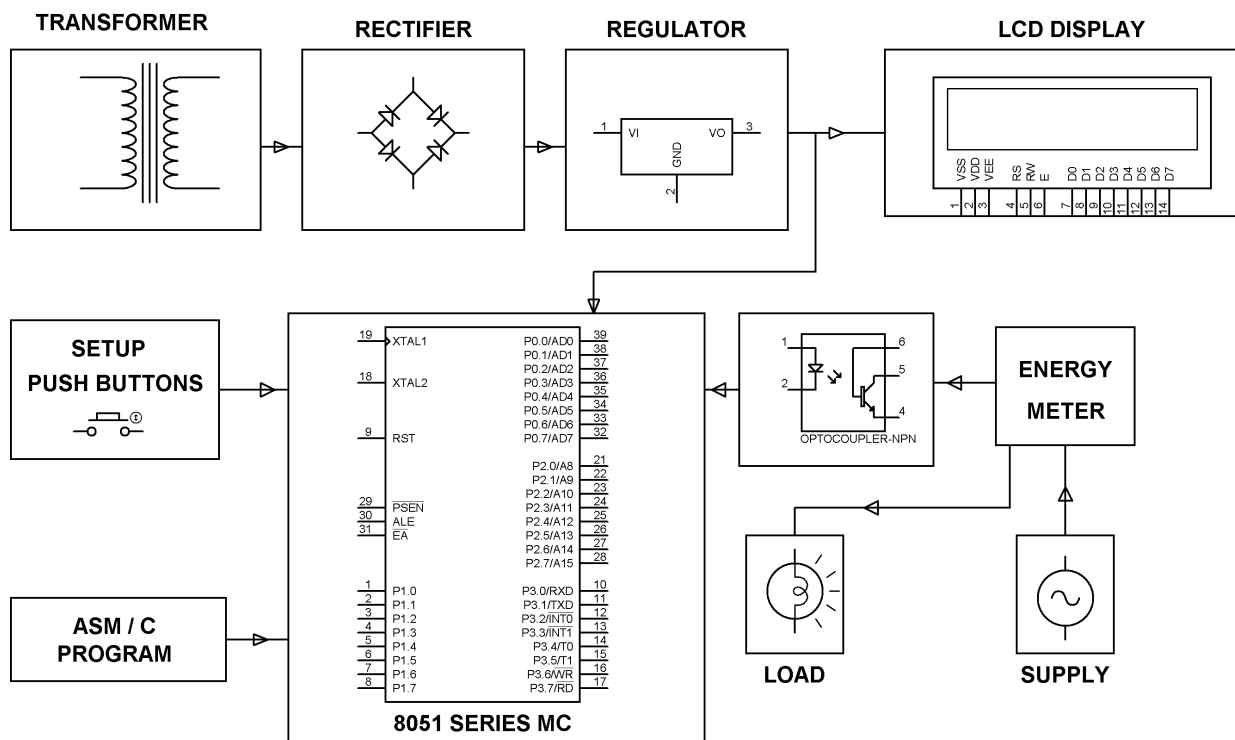
PROGRAMABLE ENERGY METER FOR ELECTRICAL LOAD SURVEY

ABSTRACT

The project is designed to evaluate consumption of any load in units and cost in rupees as per the energy tariff and the number of hours the load is going to be used. The evaluation is almost instantaneous thus assisting the user to save hours of waiting time for the load survey.

An energy audit is an inspection, survey and analysis of energy consumption with possible conservation in domestic sector or industrial environment etc. As unit cost of electricity is very high these days it is essential to know if a particular device or instrument is energy efficient or not. This system proposes an energy auditing system for the instruments where the microcontroller calculates the units that will be consumed by the loads and the rupees that will be spent on it. The input data i.e. energy tariff and number of hours the load is likely to be used, is given by the user through push button switches. The relevant information is displayed on an LCD interfaced with the microcontroller. The microcontroller used in the project is of 8051 family. Further the project can be enhanced by using a GSM modem interfaced to the device for remote monitoring of these data over GSM network via SMS. Even load control can also be achieved over SMS.

BLOCK DIAGRAM



HARDWARE REQUIREMENTS:

Transformer, Diodes, Capacitors, Resistors, LEDs, 8051 series Microcontroller, Energy Meter, Opto-Isolator, Push Buttons, Crystal, LCD.

SOFTWARE REQUIREMENTS:

Keil compiler

Language: Embedded C or Assembly.