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POWER THEFT DETECTION AND INTIMATION ENERGY METER INFORMATION THROUGH SMS WITH AUTO POWER CUTOFF.

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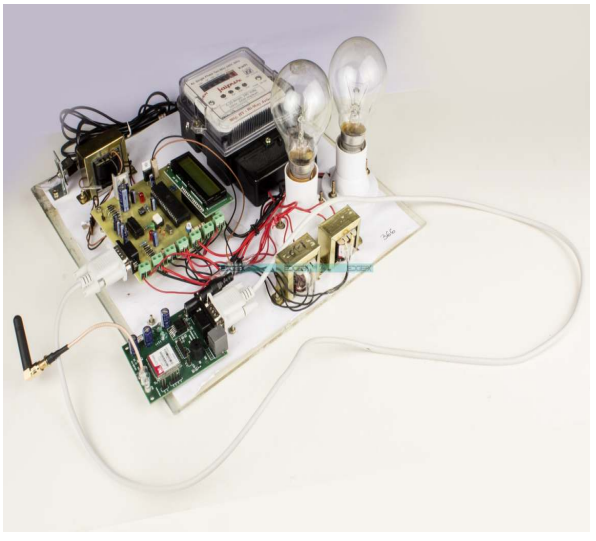

ABSTRACT

Electricity consumer dishonesty is a problem faced by all power substances. Useless and wasteful present methods of identifying and prohibiting Power theft cause a profit loss along with harm to personal and public property .The present tendency of due collection suffers from unproductive system of billing and compilation in the way of waiting of precious manpower[2]. One of the demands in finishing power theft is the complexity in detecting power theft. So our aim is to overcome these problems by authority robbery and indication to energy panel regarding indicator information during SMS and cut off the authority loads while authority robbery is detect. In particular it is complex to find the precise location where power theft is happening. Measurement of parameters similar to authority contour present and authority contour voltage have not be accessible in aacceptable way to upgrade control system organization. However suitable to improvement in current technology we tin provide improved result to identify the authority robbery.

KEYWORDS :*Microcontroller, GSM, SMS.*

I.INTRODUCTION :

ELECTRICITY fraud can be defined as a dishonest or illegal use of electricity equipment or service with the intention to avoid billing.Electric utilities lose large amounts of money each year due to fraud by electricity consumers. After charging this system it enables the electricity department to examine the meter readings frequently without the person visiting each house[1].The reason of this system is to inaccessible monitoring and control of the household energy meter. This can be conclude by the use of AT89S52 microcontroller device that frequently monitors and report the energy meter readings in its unending (nonvolatile) memory location. These entire system also makes beneficial use of a GSM modem for remote monitoring and manage of energy meter .In our system, AT89S52 microcontroller is combine with an current sensing circuit , GSM modem ,energy metering circuit and a contactor to create or crack authority line.

In normal condition, microcontroller reads energy pulses & current indicate. If current is

sketch&energy pulses are normal, there is no power theft is being complete& the o/p is associated. But if have current is sketch& energy pulses are not upcoming, and next indicate authority robbery. Whenever power theft is detected, then micro controller section will send this meter information signal to selectivity board with meters permanent number, owners location information and position by which already installed through SMS. And this controller section also disassociates power to the payload to keep away from energy (power) stealing. This system helps in the optimization of power and it is envisaged that power theft indicator would be able to curb the incidents of theft of electricity which is a basic need for the development of power sector in the country. In this project we have to place two LDR sensors in energy meter. Whenever they are going to theft the energy then LDR sensors are activated and automatically it sends a Sms through GSM Modem.

II.PROBLEM FORMULATION

1.Billing problems.(tariff)
2.Ineffective and inefficient present methods of detecting.
3.Improper location to detect the power Theft .
4.Energy meter reading are not proper.
5.Less amount of energy consumption.

III.BLOCK DIAGRAM

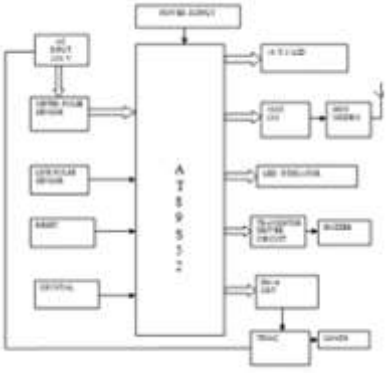

Fig:1 Block diagram of system

Power supply-

The input voltage is to apply the circuit is useful from the regulated power supply. The A.C. 230V Output Get from the rectifier is a pulsating D.C voltage. Theproduction voltage from the rectifier is providing for to a filter to eliminate any A.C modulesexistent even next rectification. Now, thisvoltage gives to voltage regulator to pure constant D.C voltage obtains. The MAX232 is a dual driver/receiver that converts low signal coming from the microcontroller into high level voltage and vice versa. The TRIAC conducts and controls the flow of current in each iteration of cycle.

Specification of Microcontroller 89S51

1.Endurance: 1000 write/erase cycles.
2.Six interrupt sources.
3.4 Fully static operations: 0Hz to 24 MHz.
4.Compatible with MCS-51 tm products.
5.Three levelmemory lockprogram.

6.128*8 bit internal ram.
7.32 programmable I/O lines
8.Two 16 bit timers/counters.
9.4k bytes of flash memory system of reprogrammable.
10.Low power idle and power down mode.[4]

Energy Meter -

The energy meter we are using gives 3200 pulses per KWH.Digital Energy Meter gives fixed number of pulses per KWH.These pulses are given to microcontroller for calculating the units consumed

LCD (Liquid Crystal Display) -

LCD which is normally known as Liquid Crystal Display&Alphanumeric Presentation it means that it can showLetters, Amounts as well as differentcodes thus LCD is a user kindlyShowmethod which can be used for showingmanycommunicationsdifferent seven sectionshow which can show only quantities and some of the letters

GSM (Global System for Mobile)-

GSM is anadditionalgroup cellular commonadvanced to provideopinionfacilities and recordstransferbyarithmeticalinflection.

GSM Specifications-1RF Spectrum
GSM 900
Mobile to BTS (uplink): 890-915 MHZ
BTS to Mobile (downlink):935-960 MHZ
Bandwidth : 2* 25 MHZ

Crystal Circuit-

This circuit gives the required clock pulses to the microcontroller to give it the sense of the reference time.

Reset Circuit-

This circuit gives the microcontroller the starting pulse required to start the operation from the start. Unless this pulse is given, the microcontroller doesn't start functioning.

Buzzer-

Early devices were based on an electromechanical system identical to an electric bell without the metal gong.

The word "buzzer" comes from the rasping noise that electromechanical buzzers made

LDR Sensor –

Light Dependent Resistors are actualbeneficialparticularly in bright/dimdevicepaths. Generally the conflict of an LDR Sensor is actualextraordinary, occasionally as in height as 1,000,000 ohms, howeveronce they remainlightened with bright, the conflictfallsnaturally. Therefore in this task, LDRdisplays an essentialpart in monitoring the electrical purposescreated on the strength of bright.

IV.RESULT -

Power theft is occurring it can detect the exact location. We can stop the power theft.

Fig 2: Output on Mobile

V.CONCLUSION–

In developing countries electricity theft is a common practice especially in remote areas, as they do not pay utility bills to a government company in case of electricity and gas as well. To solve these problem governments must think of an idea to provide help in terms of subsidy to manage this issue. By this scheme the facility supplier dismisssave the adverti sement several time with a lone communication. The facts assembly and handling mission befits firm and calmer. Some adaptation dismissremain complete to the program in fewerperiod. Variations in amount or component calculationcan be completing correcteffectually.[3]

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