

Home automation using hybrid power

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ABSTRACT

Solar Tracking System is a power generating method from sunlight. This method of power generation is simple and is taken from natural resource. This needs only maximum sunlight to generate power.

This system is tracking for maximum intensity of light. When there is decrease in intensity of light, this system automatically changes its direction to get maximum intensity of light.

Keywords: Solar panel , GSM, LDR

I INTRODUCTION

Home automation or domestic is building automation for a home, called a smart home or smart house using solar panel. It involves the control and automation of lighting, heating , ventilation, air conditioning , and security, as well as home appliances such as washer/dryers, ovens or refrigerators/freezers. GSM is often used for remote monitoring and control. Home devices, when remotely monitored and controlled via the Internet, are an important constituent of the Internet of Things. Modern systems generally consist of switches and sensors connected to a central hub sometimes called a "gateway" from which the system is controlled with a user interface that is interacted either with a wall-mounted terminal, mobile phone software, tablet computer or a web interface, often but not always via Internet cloud services.

Solar panels collect solar radiation from the sun and actively convert that energy to electricity. Solar panels are comprised of several individual solar cells. These solar cells function similarly to large semiconductors and utilize a large area p-n junction diode. When the solar cells are exposed to sunlight, the p-n junction diodes convert the energy from sunlight into usable electrical energy.

II BLOCK DIAGRAM

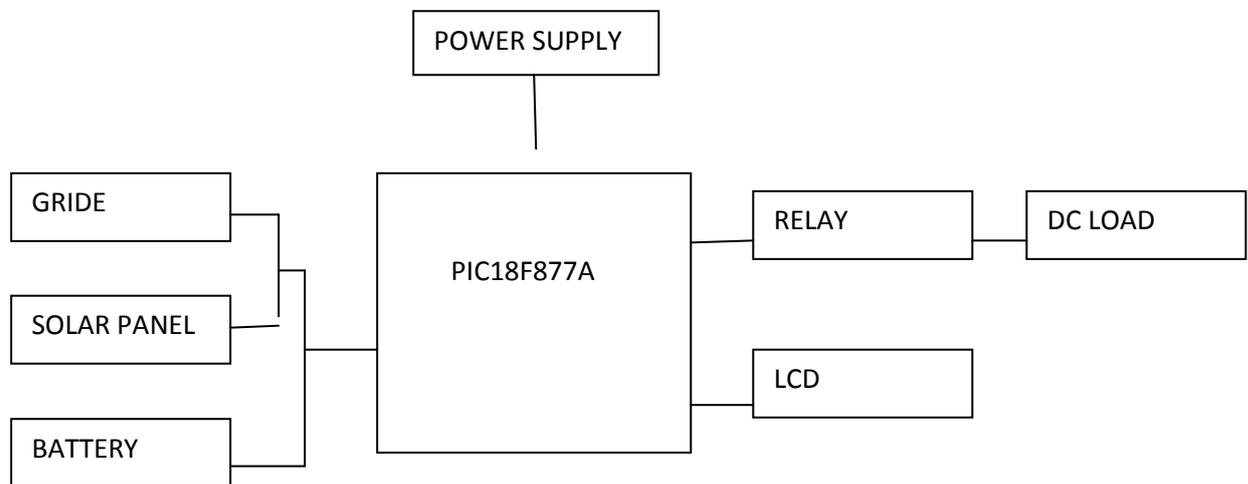


Fig.Block Diagram

III WORKING

Solar panel is the main part of our system which generates electricity and same helps to work our whole system. Electricity generated through solar energy we can use for home consumption directly which helps to reduce our normal electricity bill.

But main barrier to generate electricity through solar energy is weather. Mostly in rainy and winter season the sun rays are very rare. So it creates problem to generate electricity effectively.

For that purpose we are using the batteries which can store the electricity for a longer period but not more than 2-3 days.

In this system we are using Grid Supply our normal electricity supply as alternative to Solar Energy.

With addition to this we can remotely operate the home appliances by using the GSM (Global System Module).

IV CONCLUSION

The solar tracking system based on microcontroller and also describes about the simple and attractive features of tracking system. Here the use of motor in solar trackers enables accurate tracking of the sun and light dependent resistor are used to determine the solar light intensity.

REFERENCES

- 1 Solar Tracking System . Reshmi Banerjee
- 2 Use Of Solar Tracking System For Extracting Solar Energy.Gagari Deb And Arijit Bardhan Roy
- 3 Automatic Solar Tracker System. Nikesh.D.Watane Rakesh.A.Dafde
- 4 Solar Tracking System .Deekshith K , Dhruva Aravind , Nagaraju H , Bhaskar Reddy