Rotating solar panel circuit

How a rotating solar panel system works?

This motor is getting controlled by Atmega328 microcontroller mounted on an Arduino Uno Board which is in turn mounted on the PCB. The Rotating Solar Panel system scans from one horizon to other to know the current position of sunand hence the position from which the greater solar energy can be harnessed.

Why do solar panels rotate in the direction of the Sun?

For an efficient usage of the solar energy,the Solar panels should absorb energy to a maximum extent. This can be done only if the panels are continuously placed towards the direction of the Sun. So,solar panel should continuously rotate in the direction of Sun. This article describes about circuit that rotates solar panel.

What is rotating solar panel using Arduino project?

The Rotating Solar Panel Using Arduino project aims at charging a 12VDC Batterywith the help of a Solar Panel mounted on platform which can rotate with the help of a motor. This motor is getting controlled by Atmega328 microcontroller mounted on an Arduino Uno Board which is in turn mounted on the PCB.

Which direction does a solar panel face?

Throughout the day it will track the sun and by the evening,sun has moved towards the west,hence it will have more intensity than the east direction so the panel will face the west direction. Servo Motor: Servo motor is used to rotate the solar panel.

How does a solar power system work?

Power on the circuit and place the set up directly under the Sun (on the rooftop). Based on the light falling on the two LDRs, the ATmega328 Microcontroller changes the position of the Servo Motor which in turn moves in the panel. The solar energy can be reused as it is non-renewable resource.

How does a solar tracker work?

A solar tracker rotates the panel along one or two axes (altitude and azimuth) so that it always facing the sun directly. This can add up to 25% more energy compared with a fixed panel. Trackers are also essential with concentrating or focusing collectors which don't work well unless they are aligned with the sun exactly.

The solar panel uses photovoltaic cells (PV cells). The PV cells detect the light intensity, and according to that, the tracker adjusts the direction of the solar panel to the position of the sun in the sky. When the tracker moves ...

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Web: https://www.publishers-right.eu/contact-us/
Email: energystorage2000@gmail.com
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