

# Solar energy automatic tracking system based on plc control



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## Overview

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This paper presents a new design of a Three-axis solar tracking system which is based on Programmable Logic Controller (PLC). More specifically this project concerned the programming of the linear motors that were used to move the solar panel into the desired angle. Furthermore, a comparison was. Solar tracking systems are a crucial element in enhancing the efficiency of solar photovoltaic (PV) panels by maximizing their exposure to solar radiation throughout the day. Consumption and efficiency of solar PV cell is compared with existing. In this paper, automatic solar tracking system is implemented using PLC which tracks the sun more effectively with its simple and precise control structure in all environmental conditions.

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We have implemented a model of automatic solar tracking system using PLC to align solar panel in vertically/horizontally to make sure maximum sunrays are available onto the PV panel.

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### PLC Based Solar Tracking System

It is a control system using electronic operations s easy storing procedures,functions of position control,timed counting and input /output control are widely applied to the field of industrial automation ...

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### AUTOMATIC SOLAR TRACKING SYSTEM USING PLC & SCADA

The solar tracker is used to orient various payloads toward the sun in order to trap the energy to the maximum extent. Payloads can be photovoltaic cells, reflectors, lenses or other optical ...

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### PLC-Based Solar Tracking System:

## Design & Programming Insights

The target of this project was to establish a solar tracking system with programmable logic controller as its controlling unit. More specifically this project concerned the programming of the linear motors that ...

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## PLC based Solar Panel Tracking System with Automatic Tilting

This paper presents a new design of a Three-axis solar tracking system which is based on Programmable Logic Controller (PLC). The automatic tracking system of solar radiation is done on ...

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## Automatic Solar Tracking System Using Siemens PLC

This research paper presents the design, implementation, and performance evaluation of a single-axis solar tracking system (SASTS) employing Siemens programmable logic controller (PLC) ...

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## PLC-Based Solar Tracking System: Design

The target of this project was to establish a solar tracking system with ...

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## PLC BASED SOLAR TRACKING SYSTEM

The target of this project was to establish a solar tracking system with programmable logic controller as its controlling unit. More specifically this project concerned the programming of the linear motors that ...

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## Industrial automation AC500 for PLC solar systems

The AC500 PLC uses high-precision solar algorithms to ensure that all type of trackers, for either PV, CPV or CSP, are precisely aligned and follow the movement of the sun with exceptional accuracy.

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## DESIGN OF SOLAR TRACKING SYSTEM USING PLC

The objective of this mini project is to develop an automatic solar tracking

system where solar panels will keep aligned with the Sunlight in order to maximize in harvesting solar power.

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### **(PDF) Automatic solar tracking system using DELTA PLC**

In this paper, automatic solar tracking system is implemented using DELTA PLC which tracks the sun more effectively with its simple and precise control structure in all environmental

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