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Design, Development and Implementation of Solar Power-Based Bluetooth Controller for an Industrial Automation System

Abstract

Industrial automation is an emerging technology and vital for enhancing productivity, safety and efficiency in manufacturing and process industries. The integration of renewable energy sources and wireless control in industrial automation is pivotal for sustainable and efficient production systems. This paper presents design, development and implementation of a solar power-based Bluetooth controller for industrial automation system using an Arduino microcontroller. The proposed system leverages solar energy for power supply and Bluetooth technology for wireless device control, reducing operational costs and enhancing flexibility in industrial environments.

Key Words: Industrial automation, Renewable energy, Wireless control, Bluetooth controller, Arduino microcontroller.

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