

PROTOTYPE PENGENDALI OTOMATIS PENERANGAN TAMAN DENGAN PANEL SURYA BERBASIS ARDUINO

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ABSTRACT

Sunlight has a crucial role and benefits for human survival on earth. Solar energy is also available large enough for life, not polluting and of course, we can enjoy it for free all the time. The issue of energy also remains an essential topic for interesting research throughout human civilization. It is because energy is an essential requirement in life. Therefore, through the design of the Prototype Automatic Controller for Garden Lighting with Arduino-Based Solar Panels, this is the concept of utilizing solar power as a source of electrical energy. In this case, the solar panels move according to the time set by the program. For solar panels driven by a servo motor SG90 as a solar panel controller, the RTC (Real Time Clock) is used to adjust the solar panel time. The time for turning off and on for the LED lights has also been determined. The prototype control system results for automatic control of garden lighting with Arduino-based solar panels show that the solar panel testing that has been set the time at 10:00, 12:00, 14:00 works well. At 18:00 or 6:00 p.m., it shows that the LED lights turn on automatically those that the program has set. Therefore this system can be used for lighting garden lights.

Keywords: *Surya Panels, Arduino Uno, RTC (Real Time Clock)*