

ABSTRAK

Telah dilakukan pembuatan sistem pengontrol cahaya untuk mengontrol kuat penerangan cahaya lampu pijar pada ruang baca berdasarkan jumlah orang yang masuk pada ruang baca. Sistem ini dibangun menggunakan sensor *infra red* sebagai pendeteksi orang masuk dan keluar dari ruang baca. Arduino uno sebagai sistem pengendali seluruh sistem yang dibuat. Pengujian dilakukan dengan beberapa tahap antara lain hubungan kondisi lampu terhadap jumlah orang yang masuk dan keluar dari ruang baca serta pengujian hubungan antara kuantitas lux cahaya lampu pijar terhadap jarak. Hasil penelitian ini menunjukkan bahwa sistem dapat mengontrol dan menjaga kestabilan intensitas cahaya ruang baca berdasarkan jumlah orang dan yang keluar dari ruang baca.

Kata kunci: Sensor, Intensitas Cahaya, mikrokontroler ATmega328 Arduino Uno.

The image features a large, semi-transparent watermark of the Universitas Medan Area logo in the background. The logo is circular with a blue border containing the text 'UNIVERSITAS' at the top and 'MEDAN AREA' at the bottom. In the center, there is a stylized emblem with a star above it and an open book below it. The word 'ABSTRACT' is printed in a bold, black, serif font, centered over the emblem.

ABSTRACT

Has made the manufacture of light control system to control the powerful illumination incandescent light bulbs in the reading room based on the number of people entering the reading room. The system is built using infra red sensor as a detector of people in and out of the den. Arduinouno as control systems throughout the system are made. Testing is done by several stages include light conditions relation to the number of people in and out of the reading room as well as testing the relationship between the quantity of lux incandescent light bulbs to the distance. The results of this study indicate that the system can control and maintain stable light intensity based on the number of people reading room and coming out of the den.

Keywords: Sensor, Light Intensity, Arduino Uno ATmega328 microcontroller.