

Rancang bangun alat ukur efisiensi lampu pijar berbasis mikrokontroler = Design of incandescent lamps efficiency measurement based microcontroller

Yuanita Adriana, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20330457&lokasi=lokal>

Abstrak

Telah dibuat alat ukur efisiensi lampu pijar berbasis mikrokontroler. Alat ukur ini mengimplementasikan prinsip dasar fotometri. Sistem ini menggunakan sensor cahaya (OPT101) untuk mengukur nilai intensitas lampu serta dilengkapi pengendalian posisi sensor tersebut ke sumber cahaya (lampu pijar), selain itu juga terdapat pengendali daya lampu (tegangan AC - Alternating Current) yang dapat diatur melalui program kendali dan monitoring efisiensi lampu pijar menggunakan software LabVIEW. Pembacaan daya listrik menggunakan sensor arus (CSLW6B1) dan pengkondisi sinyal precision rectifier (sebagai pembaca tegangan).

Seluruh sistem ini dibawah pengendalian mikrokontroler dan hasil pengukuran dari pengolahan data akan ditampilkan pada LCD dan program kendali dan monitoring efisiensi lampu pijar menggunakan LabVIEW. Penggunaan program kendali dan monitoring efisiensi lampu pijar selain untuk mengatur daya lampu juga bertujuan menampilkan grafik yang tidak dapat ditampilkan pada LCD.

Has created incandescent lamps efficiency measure based microcontroller. This measure to implement the basic principles of photometry. The system uses a light sensor (OPT101) to measure the light intensity values as well as control the position of the sensor is fitted to the light source (incandescent bulbs), but it also contained control lamp power (voltage AC - Alternating Current) to set channeled through program control and monitoring efficiency incandescent lamps using LabVIEW software. Power readings using current sensor (CSLW6B1) and signal conditioners precision rectifier (voltage as a reader).

The entire system is under the control of the microcontroller and the measurement results of the processing of data will be displayed on the LCD and control program and monitoring the efficiency of incandescent lamps using LabVIEW. The use of program control and monitoring the efficiency of incandescent lamps in addition to set power also aims to show that the graph can not be displayed on the LCD.