ABSTRACT

Lighting for these days is a necessary thing. In an office space, Power consumption in lighting sector consume about 20-60% from power consumption in total. These research purpose is to save energi consumption in the lighting sector in office space. The lamp that will be implemented in this system is LED lamp 48 Watt using 220 Volt AC as the power source. The conditions that will created by this system are bright, dim, and turned off.

The lighting that will be inflicted is depend on the conditions that already predefined. If there's any human movement in the room, the lights will turn on, and light intensity on the lamp will be depends on the intensity surround the lights. The system then will calcute the power consumption during system running and will be shown in the website. If the power consumptions are exceed the daily consumption power, then the light intensity will decrease. This system is built in order to save power consumption for about 20-60%. System will work using Fuzzy Logic Method so the system will be integrated well with the environment. By the power consumption monitoring, user is expected to calculate the cost of power consumption in the lighting sector. After through the system testing, the percentage of power consumption saving is obtained 55.95% with the error for about 5%.

Keywords : power analyzer, power monitoring, light intensity, current, power saving