

ABSTRACT

Automated systems are currently quite widely used for various purposes to facilitate human work. The permit system in this case as a field of science that enables automatic implementation. In this research, a control system is applied to control the lights that use fuzzy logic, with Passive Infrared sensor devices to determine whether or not there is human activity in a park area, and a Light-dependent Resistor sensor to get the value of light sensors that can be used, compilation is rather dim, dim , rather bright, bright. The control used is the Arduino Uno microcontroller.

Passive Infrared sensor testing is done by determining the position of the sensor so that the sensor can detect human motion. Testing of the Light Dependency Resistor sensor is done by illuminating the sensor using a flashlight with different intensity values. The results showed how the time to respond to lights in the area that changed each sensor. For Passive Infrared sensors and Light Dependent Resistors, even though the distance is different. Based on the results of the response time obtained from the Passive Infrared sensor with a range of distance from the Passive Infrared sensor that is <5 cm from humans. While the sensor depends on the Light Resistor by the intensity of the light that is set. Required 50% in a rather dim condition, 80 in a dim condition, 100 in a rather bright condition and 120 in a light condition where the system is equipped with solar panels as electrical energy

Keywords : Solar Panel, Sensor Passive Infrared, Sensor Light Dependent Resistor, Arduino Uno