DESIGN OF LIGHTING AUTOMATION SYSTEM AT SMART BUILDING DEPARTMENT ENGINEERING PHYSIC FTI-ITS

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Abstract
Waste electrical energy can imposes bills account, but for general use classrooms less so payed for turn off the lights when not in use. Therefore need to the existence of an automated lighting system in the room for energy saving electricity, when there is no one in the room then lights it automatically turns off. To make this automated lighting system components i.e. sensor detection is required the number of people who are in the room a little bit with the amount of numerically is less than 14 and lot or more than 13 people. Then the sensor provides information on actuators powering lights kontroller so automatically appropriate command kontroller. On the measurement of the intensity of the illumination uses 3-point measurement with coordinates for the point I (1,58; 1.75; 0.81), Point II (4.75; 1.75; 0.81) and Point III (7; 1.75; 0.81)

In the automatic lighting system is to turn on the lights the first takes a 3.62 ±0.13 seconds with uncertainty of measurements is 0.06 and to ignite both of the lights turned out to require a delay 2.84 ± 0.22 uncertainty of
measurements is 0.06. For the measurement of the intensity of illumination when the lights first lit produced $140.4 \pm 2.07$ Lux, and the lights second production $53.6 \pm 1.14$ Lux with uncertainty of measurement is 0.50, at point II is $19 \pm 1.58$ Lux with uncertainty of measurements is 0.70, at Point III is $19 \pm 1.58$ Lux. While the intensity of illumination measurement time while both lamps lit is $173.2 \pm 3.03$ Lux with uncertainty of measurements is 1.36 at Point I is $176.8 \pm 2.39$ Lux with uncertainty of measurements is 1.07, at Point II is $56.4 \pm 2.07$ Lux with uncertainty of measurements is 0.93.

**Key words:** the intensity of illumination, the automatic lighting system