

An Efficient LSDM Lighting Control Logic Design for a Lighting Control System

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Abstract— in this paper, we propose an efficient LSDM lighting control logic design for a lighting control system. The proposed LSDM lighting control logic is designed according to the operating conditions by dividing them into the signal control part for the I/O data bus and the timer/counter part for the clock signal control. Also, the control logic is transmitted to the MCU through a data bus based on the environmental information provided by each sensor node. The power dissipation rate of the proposed LSDM lighting control logic was measured in order to demonstrate the efficiency of the applying the control system. In addition, it was demonstrated that the proposed design is effective for the reduction of overall power consumption.

Keyword— Control logic, LSDM, Lighting control, Signal control, Power dissipation, MCU



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