

Design and Construction of a Sensor Circuit of (a counting device) Using LDR

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Abstract

This is a small scale design and construction of a circuit that can be made in the laboratory. And also it intends to be used as a teaching aid of the Physics Academic Subject, Introduction to Electronics and Semiconductor Physics (Phy-4002) for 4th year B.Ed. students. This explains how an LDR can be used in simple circuits to control devices according to the ambient levels of lighting. The 4th year B.Ed. students can learn the basic design of electronic circuit practically.

This sensor circuit is built by using LDR Light Dependent Resistor, 7447 ICs, 7490 ICs , 555 IC, resistors (100 ohm, 220 ohm, 10 kilo ohm, 5 kilo ohm, 1 kilo ohm), capacitors (0.1 μ F, 10 μ F) , seven-segment LED displays , 9-volt battery and connecting wires are required. It counts two digits 00 to 99. So it is applicable to check the entry and exits for security.

Keywords: sensor circuit, LDR, ICs, resistors, capacitors, LED displays

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