

Burglar Alarm

Code: HB7

Or

Light Activated Switch

(Assembled / Un- Assembled)

Description:

The circuit illustrated here is used as an Burglar alarm. LDR is kept at such a place that when thief enters our house using any light source on the LDR.

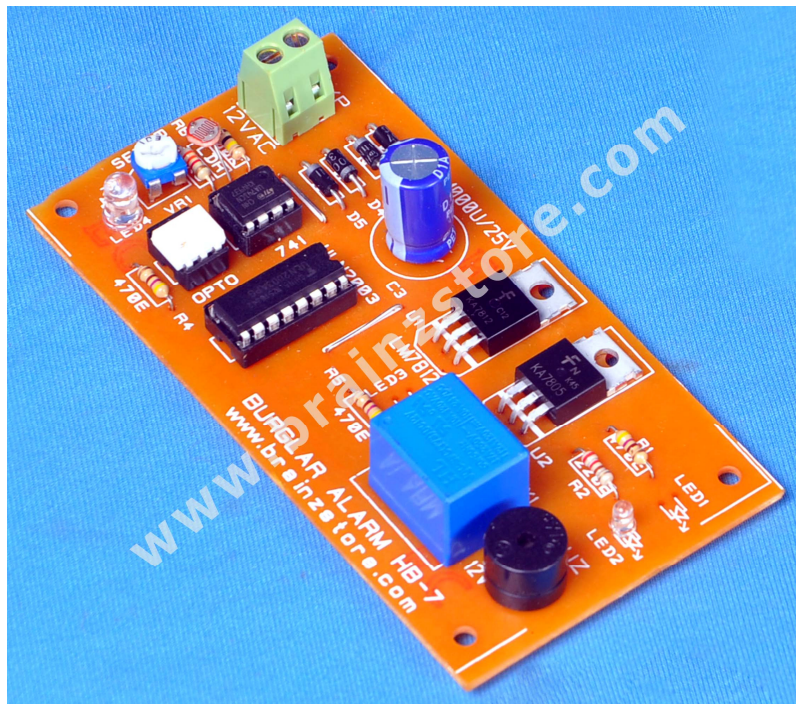
Here IC 741 is wired as a sensitive comparator, whose set point is set by variable resistor VR1. The voltage divide by LDR and R5 is given at non inverting pin of IC 741. At standby mode these two voltages are set equal by VR1. Now the output (pin6) of comparator will be low. The voltage at trigger pin of IC2 (Uln2003) will be zero and there will be no alarm. When light falls on the LDR, causes its resistance to decrease. Now the voltages at the inputs of comparator will be different and the output of 741 (pin no 6) will be high. This makes a positive going pulse to trigger the IC uln2003 and switch on relay to produce alarm.

The opto-coupler MCT2E provides proper isolation between trigger circuit and alarm circuit.

The entire circuit needs +12v and +5v regulated power supply; this is achieved by 7812 and 7805 respectively. The bridge rectifier (D1, D2, D3, and D4) converts ac in to DC.

Dimension:

10.5 * 5.5 cm



Caution: * Input AC 12 V should be given via step down transformer**

Diode (D2-D5) ----- IN4001

Capacitor

C3 ----- 1000MFD/25v

Resistor:

R2 ----- 220 E

R1 = R5 ----- 470 E

I/P ----- 12V AC / DC

LED1 – LED3 ----- 3mm LED

RLY1 ----- Cube Relay (12V/7 Amps)

IC ----- 741 , ULN2003 , MCT2E opto

Reg U1 ----- 7812

Reg U2 ----- 7805

VR1 ----- 10K preset (for sensitivity Adjustment)

Buz ----- Buzzer 12mm

This box includes

- Assembled / Un Assembled PCB
- Required components
- Circuit Diagram and Explanation