

UNIVERSITI TEKNOLOGI MARA  
KAMPUS BUKIT MERTAJAM  
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FINAL REPORT OF DIPLOMA PROJECT

FACULTY OF ELECTRICAL ENGINEERING



VERSATILE OPTICAL TRIGGER

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**ABSTRACT.**

This Versatile Optical Trigger circuit is a trigger circuit where is depending on the amount of lights that falling on the sensor. It can respond in dim light or bright condition Application to this trigger circuit include switch on a lamp in a cupboard when the door is open Modification can be done to the trigger circuit by adding second circuit called differentiator The differentiator changes the response of the trigger of the trigger, instead of being sensitive to light level it becomes sensitive to the rate of change of the light level It can be set to respond in dim or bright condition. For example, it switches on the lamp or buzzer when there are shadow or rapid changes on the sensor. It will trigger the switches (lamp or buzzer) until the user push a button to stop it. It is able to make a transient response or a permanent one. A permanent response is useful in a security system to detect the intruder. However, the circuit will not trigger with slow changes of light level, such as might be caused by the arrival of dusk or