FACULTY OF ELECTRICAL ENGINEERING

MARA UNIVERSITY OF TECHNOLOGY

FINAL REPORT OF DIPLOMA PROJECT

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3 DIGIT COUNTER MODULE

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ABSTRACT

A counter is one of the most useful and versatile subsystems in a digital system. A counter driven by a clock can be used to count the number of clock cycles. Since the clock pulses occur at known intervals, the counters can be used as an instrument for measuring time and therefore period or frequency. Our project is 3-digit counter module, which is capable of counting input pulses from 1 up to 999. It consists of two buttons, which is start and reset. It is widely used in digital voltmeters, frequency counters where a decimal count is needed. It can also act as an electronic rosary. We believe that this project can give benefit to our daily lives and just acquires a small budget.

ACKNOWLEDGEMENT

First and foremost, thanks to GOD: Allah a.w., the most gracious and most merciful for leading us to attend this course and directly able to perform this project for our useful knowledge. Knowledge is the thing that required in our religion, disregard whether we practice it or not as long we performed out responsibility as a student, which is to gain knowledge to the max level that we can obtain.

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MAY ALLAH bless them all; InsyaAllah..........

1.1   INTRODUCTION

On several occasions counting is required, but manual counting become time-consuming and inaccurate when objects to be connected are very large in number, or they pass through in quick succession. In such situations, counters using electronic circuit are more reliable than manual counting. Generally, with an electronic counter installed, the object to be counted are allowed to interrupt a light source and the electrical pulses produce are counted

A counter can also be used effectively to count time intervals. The best example is in the measurement of shutter time in professional cameras. Counters are routinely used to count the number of persons entering an auditorium or pills dropped into a bottle.

Basically, a digital frequency counter counts the number of pulses per second, which gives the frequency flow meter, tachometer, voltmeter, stopwatch, frequency counter, etc. Moreover, this counter can be connected to remote controller devices, to count the flow of traffic on roads.