

MINI PROJECT REPORT
ON
AC POWER SUPPLY INTERRUPTION
COUNTER WITH INDICATOR

**Submitted in partial fulfillment of requirement
for the award of the degree of**

**MASTER OF SCIENCE
IN
ELECTRONICS
OF
UNIVERSITY OF KERALA
BY
JIYA JACOB**

(Reg.No:651-17807004)



NATIONAL COLLEGE
(Affiliated to University of Kerala)
MANACAUD P.O., TVPM-009



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DEPARTMENT OF ELECTRONICS

CERTIFICATE

*This is to certify that the mini project report entitled “**AC POWER SUPPLY INTERRUPTION COUNTER WITH INDICATOR**” is a bonafide record of the work done by **JIYA JACOB (Reg.no:651-17807004)** of National College, Thiruvananthapuram towards the partial fulfillment of the requirement for the award of the degree of **Master of Science in Electronics** of the University of Kerala during the period 2017-2019.*

.....

Mr. Sudheer.A
(Project Co-ordinator)

.....

Mr.Madhusoodhanan Pillai. T. G
(H.O.D)

.....

External Examiner

.....

Dr. Abdul Rahim. M
Principal

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JIYA JACOB

**AC POWER SUPPLY INTERRUPTION
COUNTER WITH INDICATOR**

ABSTRACT

The name of the proposed mini project is AC POWER SUPPLY INTERRUPTION COUNTER WITH INDICATOR.

This circuit counts mains supply interruptions (up to 9) and shows the number on a 7-segment display. It is highly useful for automobile battery chargers. Based on the number of mains interruptions, the user can extend the charging time for lead-acid batteries. IC CD4033 is a decade counter 7-segment decoder. Its pin 3 is held high so that the display initially shows '0.' Clock pulses are applied to clock input pin 1 and clock-enable pin 2 is held low to enable the counter. Seven-segment, common-cathode display indicates the mains interruption count. Capacitor provides a small turn-on delay for the display.

Simple and easy circuit designed to count the occurrence of power supply interruption. This circuit will help us to count the AC power interruption using seven segment display from 0 to 9 (you can design two digit counter by adding another counter stage) and also we can reset the count when needed. This circuit contains three stage, first one is AC power input stage, second stage is opto coupler & Johnson decade counter then final third stage is number display.

Mains Supply interruption indicator circuit can be used in applications where it is necessary to know whether the mains supply has been continuous or not. The circuit mains supply interruption indicator will be useful for monitoring mains supplies to recording equipment, especially in the recording of computer software tapes, where the slightest interruption in the mains supply will cause an error in the data being recorded. It can also be used with digital clocks working on mains. An interruption in the mains supply will cause an LED to flash as a warning that the mains supply was interrupted.

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INTRODUCTION

BLOCK DIAGRAM DESCRIPTION

CIRCUIT DIAGRAM DESCRIPTION

HARDWARE DESCRIPTION

DATASHEET