

A
Project Report
On
AUTOMATIC EXHAUST WITH DUST SENSOR

Submitted to
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR, ANANTHAPURAMU
In Partial Fulfilment of the Requirements for the Award of the Degree of
BACHELOR OF TECHNOLOGY

In
ELECTRONICS & COMMUNICATION ENGINEERING

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2014-2018



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BONAFIDE CERTIFICATE

This is to certify that the project work entitled “**AUTOMATIC EXHAUST WITH DUST SENSOR**” is a bonafide work carried out by

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ACKNOWLEDGEMENT

I express my sincere and heartfelt gratitude to **Dr. S. Usha Rani, Ph.D., Sr. Assistant Professor** in Dept. of E.C.E, M.I.T.S, Madanapalle who has guided me in completing the Project with her cooperation, valuable guidance and immense help in giving the project a shape and success. I am very much indebted to her for suggesting a challenging and interactive project and his valuable advice at every stage of this work.

We are extremely grateful to **Dr. S. Rajasekaran, Ph.D., Head of the Department of ECE** for her valuable guidance and constant encouragement given to us during this work.

We are also grateful to **Dr. K. R. Kashwan, Ph.D., Dean School of ECE & EEE** for his guidance and encouragement that helped us to complete this project.

We sincerely thank **Dr. C. Yuvaraj, M.E., Ph.D., Principal** for guiding and providing facilities for the successful completion of our project at **Madanapalle Institute of Technology & Science, Madanapalle.**

We sincerely thank the **MANAGEMENT of Madanapalle Institute of Technology & Science** for providing excellent infrastructure and lab facilities that helped me to complete this project.

We would like to say thanks to other **Faculty of ECE Department** and also to our friends and our parents for their help and cooperation during our project work.

DECLARATION

We hereby declare that the results embodied in this project “**AUTOMATIC EXHAUST WITH DUST SENSOR**” by us under the guidance of **Dr. S. Usha Rani, Ph.D., Sr. Assistant Professor, Dept. of ECE** in partial fulfilment of the award of **Bachelor of Technology in Electronics and Communication Engineering, MITS, Madanapalle** from **Jawaharlal Nehru Technological University Anantapur, Ananthapuramu** and we have not submitted the same to any other University/institute for award of any other degree.

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Guide

INDEX

S. NO.	CHAPTER NAME
01.	INTRODUCTION
02.	HARDWARE REQUIREMENTS <ul style="list-style-type: none">2.1 Arduino Microcontroller2.2 LCD2.3 Dust Sensor (GP2Y1010AU0F)2.4 Exhaust Fan2.5 Transformer2.6 Voltage Regulators2.7 Bridge Rectifier2.8 Filter Circuit2.9 Relay
03	SOFTWARE REQUIREMENTS <ul style="list-style-type: none">3.1 Arduino IDE
04.	BLOCK DIAGRAM <ul style="list-style-type: none">4.1 Block Diagram of Automatic Exhaust with Dust Sensor4.2 Block Diagram of LCD and Arduino
05.	WORKING PROCEDURE <ul style="list-style-type: none">5.1 Dust Sensor Circuit Diagram & Explanation5.2 Arduino Dust Sensor Interfacing5.3 Coding
06.	APPLICATIONS & ADVANTAGES
07.	CONCLUSION
08.	REFERENCES

ABSTRACT

In this project exhaust with dust sensor which will turn the fan automatically with the help of a microcontroller. It detects the dust particles even minute particles also. It performs two actions, first of all, it detects the dirt particles and thus instruct us if any dust particles are found around us. This project is very important in few places like semiconductor manufacturing engineering, medical researching labs, and some other electronics manufacturing industries. And the second action is it consumes less energy as the exhaust runs if it detects dirt particles only.

In this project, we are using dust sensor with LCD output, if any dirt contamination enters into sensor pit or hole then it's output is high (i.e. '1') or else the output is low (i.e. '0'). If output is high the microcontroller comes to know about it and then turns the exhaust fan with help of a motor driver. In this, we are using the components are a transformer (i.e. step down transformer), a rectifier which converts AC to DC, relay for providing required power, computer fan, dust sensor, an atmega328p microcontroller to perform all required operations for this project. The main applications of this project are an air purifier, air conditioner, air cleaner. In future GSM, a buzzer is used for alertness.

List of Figures

S. No	Figure	Name of the figure	Page No
1	2.1	Arduino board description	02
2	2.1	The sequence of events	04
3	2.1	The sequence of events to read a pin	05
4	2.1	Pin Config: TQFP top view	08
5	2.1	Pin Config: PDIP	08
6	2.1	28 MLF top view	09
7	2.1	32 MLF top view	09
8	2.1	Architecture of ATMEGA328P	11
9	2.1	Direct register addressing	19
10	2.1	Direct I/O addressing	19
11	2.1	Direct data Memory Addressing	20
12	2.1	Direct data memory with displacement addressing	20
13	2.1	Indirect data memory addressing	21
14	2.1	Indirect data memory addressing with pre-decrement	21
15	2.1	Indirect data memory addressing with post-increment	21
16	2.1	Program memory addressing(constant data)	22
17	2.1	On-chip data SRAM access cycles	22
18	2.2	Pin diagram: LCD	24
19	2.2	Block diagram of LCD display	25
20	2.2	Flow chart of interfacing LCD display	33
21	2.2	8-Bit mode-LCD	33
22	2.3	Fig. of Dust sensor	35

23	2.4	Exhaust Fan	36
24	2.4	Power supplies	36
25	2.5	I/O terminal of transformer	37
26	2.6	Voltage regulator schematic	38
27	2.7	Schematic of Illustration of Diode	39
28	2.8	Circuit diagram of power supply	39
29	2.9	Circuit diagram of Relay	40
30	3.1	Arduino IDE	41
31	4.1	Block diagram of Automatic exhaust with dust sensor	43
32	4.2	Block diagram of interfacing LCD & Arduino	44
33	5.1	Dust sensor circuit diagram	45
34	5.2	Arduino dust sensor interfacing	46

List of Tables

S. No	Figure	Contents	Page No
1	2.1	Memory size summary	13
2	2.1	Register memory	17
3	2.1	Address register memory	18
4	2.1	Data memory	18
5	2.1	Stack pointer register	23
6	2.1	Program status register	23
7	2.2	Pin description of LCD	25
8	2.2	Control & display commands of LCD	26
9	2.2	Read data from RAM	28
10	2.2	Write data to RAM.	28
11	2.2	Read busy flag & address	29
12	2.2	Set DRAM address	29
13	2.2	Set CGRAM address	29
14	2.2	Function set	30
15	2.2	Cursor or Display shift	30
16	2.2	Display ON/OFF control	31
17	2.2	Entry mode set	31
18	2.2	Return home	32
19	2.2	Clear display	32