

ARDUINO UNO-BASED ROOM TEMPERATURE SENSOR FOR AUTOMATIC FAN SPEED CONTROLLER

Dr.M.Pandi Maharajan ^{*1}, Dr.R.Ramkumar ², Dr. T.Sangeetha ³, Dr.P.Kannan ⁴

¹ *Associate Professor, Department of EEE, Nadar Saraswathi College of Engineering & Technology,

Vadapudupatti, Theni- 625531, Tamil Nadu, India, pandimaha.net@gmail.com

² Assistant Professor, Department of EEE, Dhanalakshmi Srinivasan University, Trichy, Tamil Nadu, India, 2019ramkr@gmail.com

³ Associate Professor, Department of Biomedical Engineering, karpaga vinayaga college of engineering and technology, Chengalpattu- 603308, Tamil Nadu, India, sangee4contact@gmail.com

⁴ Assistant Professor, Department of ECE, Francis Xavier Engineering College, Tirunelveli- 627426, Tamil Nadu, India, kannamuthu1987@gmail.com

Abstract: - This paper introduces an ARDUINO UNO-based automatic room temperature fan speed controller. The purpose of this presentation is to provide an overview of a standalone automatic fan speed controller that regulates fan speed in accordance with our needs. The LM35 temperature sensors are intended to be detected by this system, which then transforms the data into an electrical analogue signal that can be applied to the microcontroller. On the 16*2-line LCD, the temperatures sensed and set values are shown. The system is user-friendly because to the Liquid Crystal Display (LCD). On the LCD panel, the figures for the measured temperature and fan speed level are shown concurrently. The power supply for this project is regulated at 12V, 2A. It can be used for many different purposes, including as air conditioners, water heaters, incubators, snow-melters, heat exchangers, furnaces, and thermal pots. It is also highly compact and only requires a small number of components.

Keywords: Temperature sensor (LM35), ARDUINO UNO, FAN, LCD display, Transistor.

1. INTRODUCTION

The most frequently spelled term in the field of electronics is automation. Due to its user-friendly nature, these had greater importance done any other technology. Using existing switches in home which may produce sparks and also result in fire accidents in few conditions. This project is about creating a automatic fan control system that automatically turns the fan on and off depending on the room temperature. We used an Arduino uno microcontroller here, we can also use in MINI, but there will be some problems with power regulations, so choose UNO. The temperature sensor, here is an LM35 module but we can use and it will also give the most accurate readings. When the heat is applied to the temperature sensor, this will determine the fan automatically increasing or decreasing in speed according to the speed levels of a normal fan that are set to different temperature changes in room. The 2N2222 transistor acts as a switch and controls the fan speed depending upon temperature. 1N4007 diode controls the fan from being damaged. The LED glows whenever the temperature attains maximum.

2. LITERATURE SURVEY

