TEMPERATURE CONTROLLER

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ABSTRACT

Nowadays, environment getting warmer because of human activity like illegal logging. People are not aware or alert on temperature in the house. To overcome this situation, a device that can control the temperature in house is developed. Temperature control will detect the temperature limit that have been set by owner and the other tool to cool down the temperature will active if the temperature reach higher than the temperature that have been limited. This is the summary of how our project work. The temperature limit can be set by user . The process begin when the device is turn on. The LCD display shows a current temperature which is effect temperature and reference tempereture which is the temperature that has been setup . Therefore, the prototype should maintain the temperature. If the temperature sensor detects the temperature deviate from the temperature that have been setup, the controller generates an output signal to activate the temperature back to cool down the temperature. For instant, when the temperature exceeds higer limit then the system should switch ON the LED in blinking states and LCD display will show the current temperature of the device. Furthermore, the buzzer will automatically start working and fan start the rotation. That situation will inform the users should alert on current temperature. Next, if the temperature sensor detects the temperature falls below the setup temperature, then the system should switch OFF the LED and LCD display will show the current temperature of the device. Buzzer and DC fan also not active.

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CHAPTER 1

INTRODUCTION

In this chapter will explain about the summary of the project, objective, scope of study and the project contribution that can be applied in improving user's daily activities.

1.1 Introduction

Controlling temperature has been a prime objective in various applications including refrigerators, air conditioners, air coolers, heaters, industrial temperature conditioning and others device. Temperature controllers vary in their complexities and algorithms. Some of these use simple control techniques like simple on-off control while others use complex Proportional Integral Derivative (PID) or fuzzy logic algorithms. Why do we need temperature controller?

Temperature controllers are needed in any situation requiring a given temperature to be kept stable. This can be in a situation where an object is required to be heated, cooled or both and to remain at the target temperature or at the range point, regardless of the changing environment around it. There are two fundamental types of temperature control, open loop and closed loop control. Open loop is the most basic form and applies continuous heating or cooling with no regard for the actual temperature output. Closed loop control is far more sophisticated than open loop. In a closed loop application, the output temperature is constantly measured and adjusted to