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FINAL REPORT IN DIPLOMA PROJECT

TEMPERATURE MEASUREMENT USING TRANSISTOR AS A SENSOR

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ABSTRACT

Today, we actually on the go to the new era of technologies time past and change and everyone try to find something different from the latest technology. Computing, communication information technology and microelectronics are the most interested field that scientist concentrate.

Thus, we try to familiarize ourselves with the part of this technology by construct the project, which use to measure temperature using commercially available sensor. This simple temperatures sensor built around a transistor [used as the diode] and a single chip analogue to digital converter [ADC] CUM 3 ½ digit LED driver ICL 7107. We also use transistor T2 us the sensor. It system have two present level higher and lower level.

For our project, we also use a few passive components that easy to get from our local electronic supplies. The component such a resistor, capacitor and diode, some active component as linear ICS and transistor.

Finally, from displaying the temperature with a resolution of oil this project provides from temperature based relay activation for the controlling heater coders, iron and also at air conditioner.

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CHAPTER 1

INTRODUCTION

1.1 Background

Temperature measurement is available sensors like AD590 and LM337. Using commercially. Many circuit have been published to measure temperature, but some these system installed by dealer can cost thousand of ringgit. As an alternative, a simple temperature measurement system with multiple sensors can be designed to save a budget. The operation of this project is simple, it is combination from IC's, capacitor and transistor as a sensor. ICL 7107CPL is main IC's and component in this project. The temperature measurement system using a transistor as a sensor are divided in their different parts such as

1) The power supply

2) Temperature measurement unit (relay controller)

3) Display circuit