

Abstrack

Hipotermia on the new born baby is still a serious problem in the developing countries because it significantly increase the risk of the occurrence of mortality and also morbidity new born baby because of infection, koagulasi aberration, asidosis, and Membrane hialin disease. Detection tool on Hypotermia Warming Baby Matress is equipped with medical equipment, particularly the field of therapy that utilizes heating mattress.

This tool has a function as a detection Baby hypothermia therapy at the same time a more intensive treatment. The principle of this instrument is a temperature sensor placed on the baby's armpit it shows hypotermia heating mat work with the temperature 37 0 C. Symptoms of hypothermia when the temperature <37 0 C. while the normal temperature in the baby range 360C - 370C.

Goal is to create tools for detecting hypothermia early in the new born baby. Detector early hypothermia new born baby with Mattress warming based microcontroller AT89s51 is a tool which consists of a series of temperature sensors, IC mikrokontroller AT89s51 as the prime mover and a series of optodiode that is enabled as a switch for Heater. So that the tool is expected to be able to detect and monitor the baby's temperature hypothermia mattress.

Based on the results of measurements Hipo Lightweight C) with the error (% error) of 0.55%, the measurement (temperature 36 C) with the error (% error) of 0.60% of Hipo Medium (temperature 33 C) with the error (% and measurements Hipo Weight (temperature 29 error) of 0.68%. From the calculation ($\pm U_{95}$) get-value = 35.286 and $U_{95} + U_{95} = 36.314$. So that it can be the tool can work well.

Keywords: Hypothermia, Temperature, Mikrokontroller.

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