HEART BEAT COUNTER

ABSTRACT

The heart Beat rate known as pulse rate is the number of times a person’s heat beats in a minute. It is one of the four vital signs that are taken by doctors to assess the most basic functions of patients body. Hence counting of heart beat some times becomes essential for proper treatment.

A person’s heart forces the blood to flow through the arteries. As a result the arteries throb in sync with the beating of the heart. This throbbing can be felt at the person’s wrist and other places over the body.

Electronically this throbbing can be sensed using LDR and LED sensor. The LDR resistance changes with the intensity of the light falling on its surface. The variations in the light intensity due to blood flow are exploited in this project.

The counter is configured such that it counts the pulses for 1 minute. The process is initiated by a start condition and the count terminates at the end of 60 seconds. The result is displayed on the LCD.

Although the pulse rate can be manually measured by ourselves, an electronic digital heart beat counter gives the opportunity to measure tit automatically and continuously. Our heart beat monitor has the following salient features.

1) A Light dependent resistor is used as transducer.

2) A blinking LED for visual indication of heat beats.

3) Counts are automatic and are displayed on LCD.

4) Continuous monitoring can be done.

5) The processed signal can be fed to data logger for future reference.

6) Works on AC mains or batteries.

BLOCK DIAGRAM



