

ABSTRACT

THE WARNING SYSTEM OF WATER LEVEL DETECTION USING ULTRASONIC TRANSDUCER BASED ON MICROCONTROLLER SYSTEM

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It has been realized the warning system of water level detection using ultrasonic transducer based on microcontroller system. this transducer has a range of 2 - 5 cm height with the resolution of 0,3 cm and the result of measurement resolution based on the calculation 0,5 cm according to the real side. And it can measure the distance with effectual angle of 15°. This water level detection using voltage 5 volt on the power supply. The data aquisition has been done in two ways, namely see the value of data captured then the transducer directly to the LCD display and see the result of measurements on the tube. When data aquisition between LCD and tube there is difference of the distance that makes the difference in graphics contained error, therefore required the minimalization of errors on the program to get accurate data. The warning system in this tool indicated by the led indicator they are lights green, yellow and red. As a allert of water level status that has been set through microcontroller Atmega 16 and sound alarm automatically, if the water level exceeds the maximum limit specified. With the existence of this warning system the human can anticipate the arrival of the floods so the losses can be minimized.

Keywords: Ultrasonic, HC-SR04, Water level detection, Buzzer