

Implementation of Microcontroller based Water Flow Rate Control System using PID Controller

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Abstract

The controlling water flow rate in today's electronic presents ongoing challenges as today's employ more and more electronics in smaller spaces. In this paper, a motor control system is designed and implemented to control the water flow rate by varying water pump speed with PID control theory. Microcontroller is used as a main controller to control this pump speed. The controlling of pump speed depends on water level received as a voltage from potentiometer. Controlling of motor pump speed is depending on this water level. Pulse Width Modulation (PWM) controls the voltage of the motor. PWM output is controlled by Microcontroller (PIC 18F452). The control strategy is implemented by using Mikro C language.