ABSTRACT

Rice is a necessity for almost all Indonesian people. Rice is so important because the majority of Indonesian people make rice their staple food. However, the higher the cost of living, the higher the number of people who cannot afford their daily needs, because as the cost of living increases, the purchasing power of poor people will decrease because they cannot meet their daily needs with the money they earn. The government already has a program to help poor people by distributing free rice. Rice distribution can be helped by having a rice ATM. The rice ATM system has many parts in the system, one of which is the rice mass output control system. The weight sensor can help regulate the rice mass output system, by adjusting the valve in the system according to the weight of the rice that has come out. That way, the volume of rice that comes out can be more consistent. The output signal from the sensor will be processed by a microcontroller in the form of an Arduino Uno so that the signal received from the sensor can be processed so that it can display weight data on the LCD screen and can also command the servo motor to close the valve so that the rice load that comes out does not exceed what it should. With the existence of rice ATMs with more precise rice output, it is hoped that rice ATM users can obtain or distribute rice fairly and more evenly. The results of this research prove that the presence of a weight sensor-based rice dispenser can regulate the mass output of rice so that the mass of rice that comes out is not influenced by the volume of rice. In experiments with 2 types of rice, quite similar results were obtained with the furthest result being 0.04kg. Where the error is not caused by the pressure of the rice in the tank, but by the speed at which the servo motor opens and closes the valve.

Kata Kunci : Beras, *Arduino UNO*, Load cell, ATM beras, Raskin, Sensor massa