

**PACKING SYSTEM USING THE CONVEYOR SPEED SETTING  
METHOD BASED ON PACKING SIZE USING OUTSEAL PLC  
NANO V.4 AND HAIWELL SCADA**

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**ABSTRACT**

*Rapid technological development, followed by an increasingly high level of competition. One area that is experiencing progress is the field of industrial automation. The development of the automation system aims to ensure product quality, reduce production time and reduce costs for human labor so that the demands of the production process are faster and more efficient. The production process that is designed is a packaging system for the initial storage of the product to be filled in the packaging, in this study the authors designed a conveyor that can sort objects using a proximity sensor and adjust the speed based on the size of the packaging using PWM, and can carry out the filling process for packages based on the size of the product packaging. the. Automatic control of packing using Outseal PLC Nano.V.4, the system can be controlled and monitored using Haiwell SCADA software on a PC. Outseal PLC nano V.4 test results can operate based on program commands that have been designed. The use of PWM Outseal PLC Nano V.4 on a 12 Volt DC motor as a speed controller works in accordance with the Duty cycle and PWM scale values provided with an efficiency value of 92.7% at conveyor speed with M packaging and 97.32% on L packaging. HMI system made using Haiwell SCADA to control and monitor a successful packing system. Outseal PLC NanoV.4 can operate optimally with the SCADA system, the results of the overall system testing of all sensor components, product packaging and HMI variables are 100% successful, with an average processing time of packing size M 11.62 second and size L 14.58 second.*

**Keywords:** Conveyor, PLC, PWM, HMI, SCADA.