

**WATER FILLING AUTOMATION DESIGN BASED ON
VOLUME BASED NEXTION 3.5” HMI UART
(ARDUINO MEGA)**

*Name : Diah Purnami
Student Number : 3103201215
Supervisor : Marzuarman, S.Si., M.T*

ABSTRACT

The industrial world requires a system that works effectively, efficiently and reliably. The era of modernization has also had an impact on industrial equipment, automation systems have been widely applied in many ways, one of which is in the water filling system. Many small and medium businesses use a system to fill water into bottles manually, so the operator must pay attention to the volume of water in the bottle when filling. For this reason, a tool was created with an automatic system for filling water into bottles based on the volume of water. This tool uses HMI nextion which can regulate water filling based on the desired volume and can work effectively. A conveyor belt is used to carry bottles to the filling station with a PWM speed of 50 which can be regulated using a motor driver. A yf-S201 waterflow sensor is used to detect water volume. Through test data, for filling 500 ml, an accuracy rate of 100% was obtained.

Keywords: Nextion HMI, yf-S201 waterflow sensor, motor driver, conveyor belt.