DESIGN BUILD CONTROL SYSTEM SORTING BASED MICROCONTROLLER AT89S51 AND ATMEGA8535 ON PLANT ELECTRICAL PNEUMATIC

Name : Muhammad Adi Kurniawan
NRP : 2410030060
Department : Diploma of Instrumentation Engineering
Advisor Lecturer I : Ir. M. Ilyas, HS
Advisor Lecturer II : Andi Rahmadiansah, ST. MT

Abstract
Sort Items is a control process that serves to move goods through the conveyor by the difference in size to make it easier for goods in process, where large items will be moved via conveyor 2 (two), while the small-sized goods are moved via conveyor 3 (three). In this process, the sensor used is by utilizing a photodiode sensor resistance value, then the result is given comparator sensor readings so that the data output is in the form of digital data. Once the data is entered on the microcontroller to generate output that can distinguish the size of the goods, but the current output of the microcontroller is too small, because it is needed in order to make the relay driver relay in an off or on. Once the load on the relay will enter the directional control valve to move the cylinders, and making stuff move to the conveyor 2 (two) or conveyor 3 (three).

Keywords: Sort Items, Conveyors, photodiode sensor, comparator, Microcontroller, Relay Driver, Cylinders.