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Automated Bracket Crimper

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Automated Bracket Crimper

Final Project Report

April 28, 2017

Daniel Howard

Submitted to:

Professor Paul I. Lin, Course Instructor of ECET 491 Senior Design II



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ABSTRACT

This project will be developing and implementing an Automated Bracket Crimper system with either innovating a PLC-based Ohmmeter or developing an Arduino Ohmmeter solution for testing resistance of a gas ignitor module. The system comprises of a Direct Logic DL05 that controls solenoid valves allowing the compressed air to actuates cylinders for the needed mechanical functions. The PLC-based Ohmmeter uses a Direct logic DL05, a F0-04AD-2 Analog Input Card, and a FC-P3 signal conditioner module. The Arduino Ohmmeter solution is comprised of an Arduino Mega 2560, QAPASS 1602a LCD screen, and a couple resistors with high accuracy. The newly designed Ohmmeters will help the operator to distinguish between good or bad parts while increasing productivity. Josh Kwascigroh, a mechanical engineer, will be developing the mechanical design while I develop the electrical and controls portion of the bracket crimper and find a better Ohmmeter solution.

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