DESIGN, IMPLEMENTATION, AND INVESTIGATION OF ETHERCAT AND SERIAL COMMUNICATION SERVO CONTROL SYSTEM AND IT'S INDUSTRIAL APPLICATION

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ABSTRACT

In the paper, the possibilities provided by EtherCAT and serial communication servo controllers. The work begins with the presentation of the necessary technical solutions, and with their application in the project, extending to the physical realization of the system. The aim of the work is to create an accurate description of the advantages and disadvantages of the two servo controllers, extending to the physical realization of the systems. The work includes communication between PLC and controllers, description of servo controllers, and software development. The basic concept of servo controllers is centralized control, which is implemented with the help of a PLC, whose easily modifiable program and expandable sensors make the process even easier to follow. The work provides insight into the exciting and complex world of servo controllers, illustrating their use in industry.

Keywords: Linear Servo Drives, EtherCAT communication, Serial Communication