

CONTROL OF DC SERVOMOTOR USING RELAY AND POLE PLACEMENT METHOD BY MATLAB SIMULINK

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ABSTRACT

Automation and control is becoming more popular these days in industrial domain. Devices are controlled automatically and functioning according to computer interface guidelines. DC motors are frequently used device in such kind of industries for automation purpose.

For a more efficient speed control, closed loop control system of the servo motor is realized with the help of relay and pole placement method. In this paper we use transfer function to analyse of DC Servomotor. The reason behind it, transfer function is a elegant method of handling non-zero initial condition and it also can handle multiple source (multiple inputs), can solve for multiple outputs (any voltage and current)- MIMO system. For study and experiments use PID controlled closed loop system. The complete system organization and simulation of the proposed system is described in details. The performance of the designed system is evaluated here. Simulation of the system is done in MATLAB Simulink. In this project, we have achieved control of “dc servomotor using relay and pole placement method by MATLAB Simulink”.

KEYWORDS: DC Servomotor, Computer Interface, MATLAB Simulink