Control Systems Lab

Experiment No – 1

DC Motor Position Control

Aim
Design and implement a PID position controller using Arduino Mega.

Objectives
a) To rotate the dc motor by an angle of 180 degrees from any given point.
b) To ensure that the task is constrained by the design specifications such as 0.5 second rise time, 1 second’s settling time and 10% overshoot.

Prerequisites
Arduino programming, PID control logic

Materials/ Equipments required
DC Motor setup, Arduino Mega, A-B cable, Power supply, L293D IC, Jumper wires, Single stranded wires, Bread board, Screw driver and Wire stripper.

Block diagram

Fig: Block diagram for DC motor position control