

Control Systems Lab

Experiment No – 1

DC Motor Position Control

Aim

Design and implement a PID position controller using Arduino Mega.

Objectives

- To rotate the dc motor by an angle of 180 degrees from any given point.
- 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

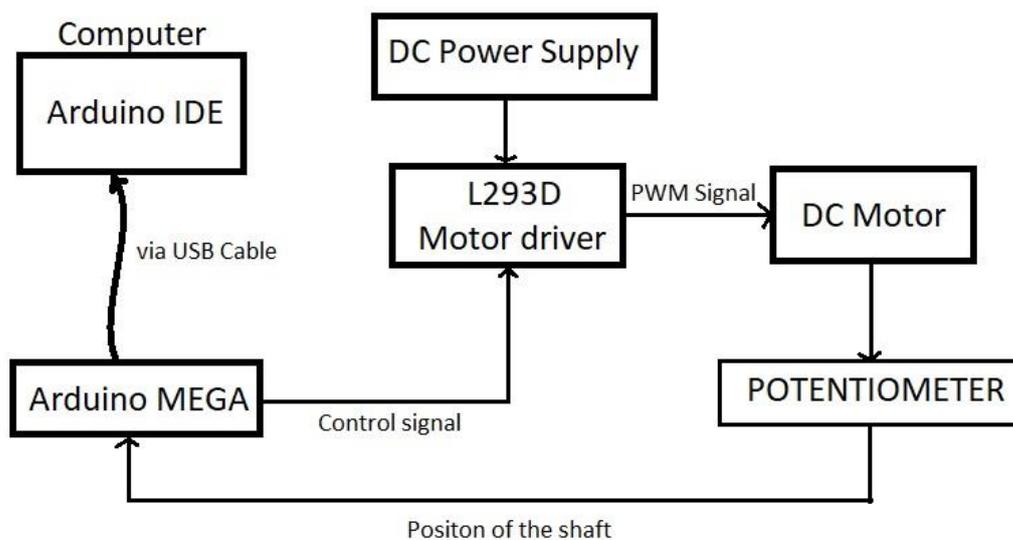


Fig: Block diagram for DC motor position control