September 22, 2025

0.1   Introduction

This experiment covers the basics of DC motor and PID control.

0.2   Methodology

Open-Loop Speed Control of a DC Motor

1. Switch on supply and measure all constant voltages and calibrate variable voltages in terms of voltages and angles in degrees.

2. Disconnect all cable wires from the hardware module.

3. Make circuitry as shown in Fig. 0.1 for the implementation of open-loop speed control of a DC motor.

4. Connect Output A of the motor plant to channel 2 of the oscilloscope.
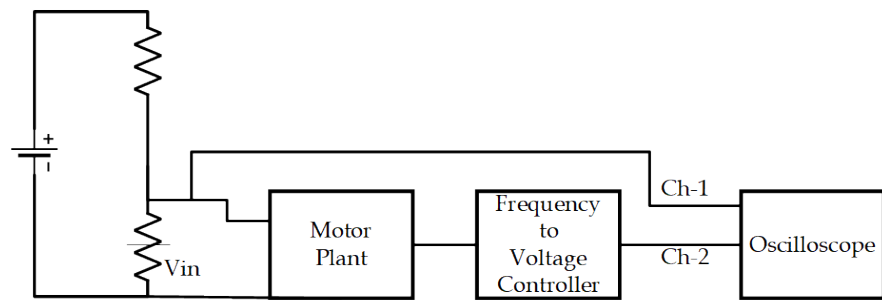
.1   Appendix

Additional reference material.

Figure 0.1: Open-loop speed control setup.