ELEC-313
Lab 4: DC Motor Driver

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1 Objective

The objective is to construct, measure, and observe the behavior of two common diode circuits: a voltage rectifier, and a voltage regulator.

2 Equipment

Compact L290 Motor Driver Kit	Function generator: HP 33120A
6 V DC Motor	Multimeter: Fluke 8010A
Power supply: HP E3631A	Oscilloscope: Agilent 54622D

3 Schematics

4 Procedure

4.1 Part One

4.2 Part Two

5 Results

Enable	L_1	L_2	V_{out}	LED	Motor
L	L	L			
L	L	H			
L	H	L			
L	H	H			
H	L	L			
H	L	H			
H	H	L			
H	H	H			

Table 1: Logic Table

6 Comparison of Results

7 Conclusion

8 Equations

$$\%_{diff} = \frac{|nominal - measured|}{nominal} \times 100\% \tag{1}$$

$$V_r = V_{max} - V_{min} \tag{2}$$

$$\%_{reg} = \frac{V_{load} - V_{noload}}{V_{noload}} \times 100\% \tag{3}$$