ME 360: FUNDAMENTALS OF SIGNAL PROCESSING, INSTRUMENTATION, AND CONTROL

Experiment No. 4
Modeling and Identification of an Electric Motor using Step Response Methods
Data Sheet

6.2 STEADY-STATE GAIN

V_{DAC} [V]	V_{DMM} [V]	$K = V_{DMM} / V_{DAC}$ [–]
3		
4		
5		
6		

Observations:

6.3 STEP RESPONSE

Method	Data	
	V_{in} (t ≥ 0)	4 V
	V_{out} (∞)	
	$K = V_{out}$ (∞) / V_{in} (t ≥ 0)	
Time at 63.2 % of Maximum Change	$\tau_{63.2}$	
Steady-state Asymptote and Tangent at t = 0	τ_{tan}	
Integral of Response Curve	K_{int}	
	τ_{int}	
Iterative Fit of Observed Response Data	K_{fit}	
	τ_{fit}	

Observations: