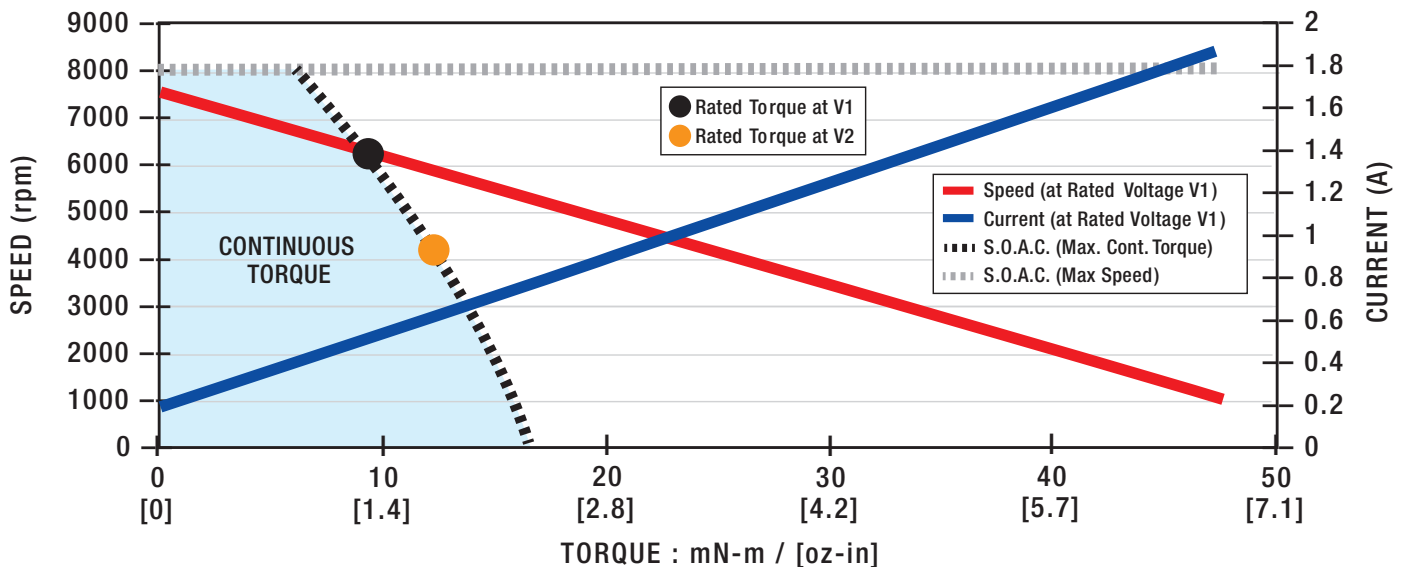


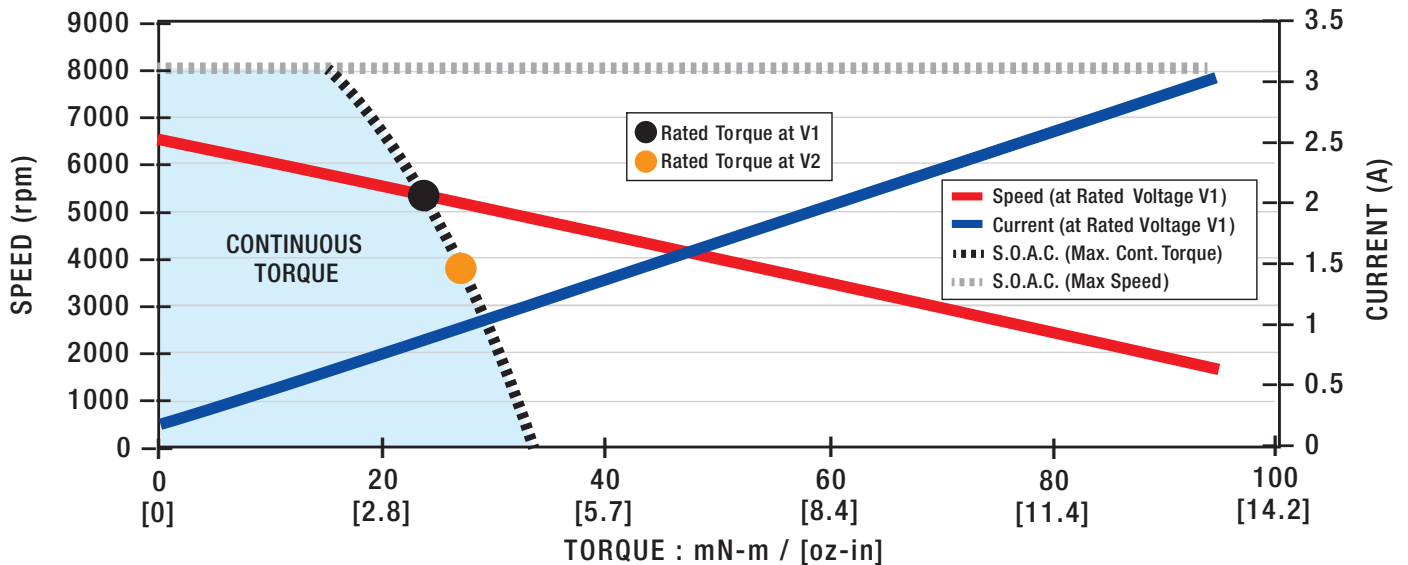
Motor Data		Units								
Rated Voltage V1	V_r	V	9.55	12.0	15.2	19.1	24.0	30.3	38.2	48.0
Rated Torque ¹ •	T_r	Nm	0.010	0.0099	0.0095	0.0094	0.0093	0.0092	0.0092	0.0092
		oz-in	1.5	1.4	1.3	1.3	1.3	1.3	1.3	1.3
Rated Speed ¹	ω_r	rpm	6020	6080	6230	6230	6260	6320	6300	6290
Rated Current ¹	I_r	A	1.4	1.1	0.83	0.65	0.51	0.40	0.32	0.25
Rated Power ¹	P_r	W	6.5	6.3	6.2	6.1	6.1	6.1	6.0	6.0
No Load Speed	ω_{nl}	rpm	6930	6850	6910	6880	6890	6910	6880	6880
No Load Current	I_{nl}	A	0.40	0.32	0.25	0.20	0.16	0.13	0.099	0.079
Rated Voltage V2	V_r	V	7.58	9.55	12.0	15.2	19.1	24.0	30.3	38.2
Rated Torque ¹ •	T_r	Nm	0.013	0.013	0.012	0.012	0.012	0.012	0.012	0.012
		oz-in	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7
Rated Speed ¹	ω_r	rpm	3970	4060	4130	4200	4220	4230	4230	4250
Rated Current ¹	I_r	A	1.6	1.2	0.98	0.77	0.61	0.48	0.38	0.30
Rated Power ¹	P_r	W	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
No Load Speed	ω_{nl}	rpm	5440	5400	5400	5420	5430	5430	5410	5430
No Load Current	I_{nl}	A	0.38	0.30	0.24	0.19	0.15	0.12	0.093	0.074
Motor Constant	K_M	Nm/ \sqrt{W}	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
		oz-in/ \sqrt{W}	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Torque Constant	K_T	Nm/A	0.0122	0.0156	0.0196	0.0247	0.0310	0.0391	0.0495	0.0622
		oz-in/A	1.73	2.20	2.77	3.50	4.39	5.53	7.00	8.80
Voltage Constant	K_E	V/(rad/s)	0.0122	0.0156	0.0196	0.0247	0.0310	0.0391	0.0495	0.0622
		V/krpm	1.28	1.63	2.05	2.59	3.25	4.09	5.18	6.51
Terminal Resistance	R_{mt}	Ω	1.25	1.93	2.99	4.70	7.38	11.6	18.5	29.2
Inductance	L	mH	0.72	1.2	1.8	2.9	4.6	7.3	12	19
Peak Current	I_{pk}	A	7.6	6.2	5.1	4.1	3.3	2.6	2.1	1.6
Electrical Time Constant	τ_e	ms	0.58	0.60	0.61	0.63	0.63	0.63	0.63	0.63
Mechanical Time Constant	τ_m	ms	16	15	15	15	15	14	14	14

¹Recorded at maximum winding temperature at 25°C ambient and without heatsink.



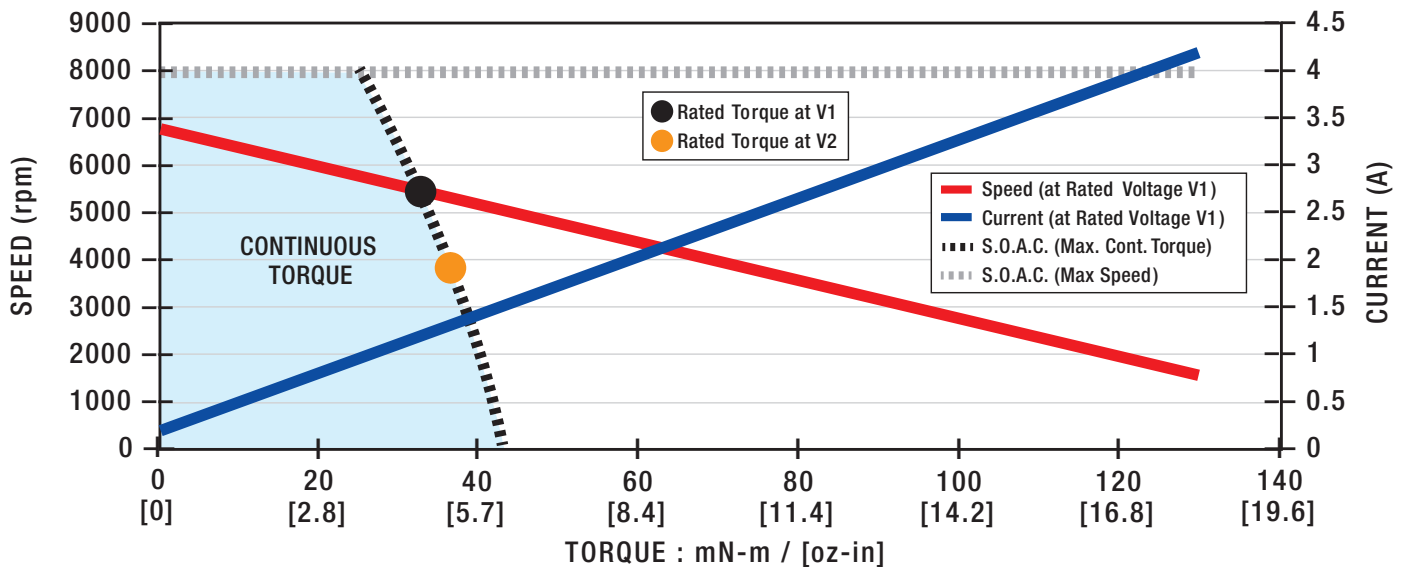
Motor Data		Units								
Rated Voltage V1	V _r	V	9.55	12.0	15.2	19.1	24.0	30.3	38.2	48.0
Rated Torque ¹ •	T _r	Nm	0.026	0.025	0.024	0.024	0.024	0.023	0.023	0.023
		oz-in	3.6	3.5	3.4	3.4	3.3	3.3	3.3	3.3
Rated Speed ¹	ω _r	rpm	5000	5100	5300	5310	5350	5360	5390	5390
Rated Current ¹	I _r	A	2.4	1.8	1.4	1.1	0.89	0.70	0.55	0.44
Rated Power ¹	P _r	W	13	13	13	13	13	13	13	13
No Load Speed	ω _{nl}	rpm	5870	5810	5920	5870	5880	5860	5880	5880
No Load Current	I _{nl}	A	0.38	0.30	0.25	0.19	0.16	0.12	0.095	0.076
Rated Voltage V2	V _r	V	7.58	9.55	12.0	15.2	19.1	24.0	30.3	38.2
Rated Torque ¹ •	T _r	Nm	0.028	0.028	0.027	0.027	0.027	0.027	0.027	0.027
		oz-in	4.0	3.9	3.9	3.8	3.8	3.8	3.8	3.8
Rated Speed ¹	ω _r	rpm	3440	3570	3680	3750	3790	3780	3810	3830
Rated Current ¹	I _r	A	2.6	2.0	1.6	1.2	0.98	0.77	0.61	0.49
Rated Power ¹	P _r	W	10	10	11	11	11	11	11	11
No Load Speed	ω _{nl}	rpm	4630	4600	4650	4650	4660	4620	4640	4660
No Load Current	I _{nl}	A	0.36	0.29	0.23	0.18	0.15	0.12	0.090	0.072
Motor Constant	K _M	Nm/√W	0.017	0.018	0.018	0.019	0.019	0.019	0.019	0.019
		oz-in/√W	2.5	2.6	2.6	2.6	2.7	2.7	2.7	2.7
Torque Constant	K _T	Nm/A	0.0148	0.0188	0.0234	0.0297	0.0372	0.0472	0.0593	0.0746
		oz-in/A	2.10	2.66	3.31	4.21	5.27	6.68	8.40	10.6
Voltage Constant	K _E	V/(rad/s)	0.0148	0.0188	0.0234	0.0297	0.0372	0.0472	0.0593	0.0746
		V/krpm	1.55	1.97	2.45	3.11	3.90	4.94	6.21	7.81
Terminal Resistance	R _{mt}	Ω	0.720	1.08	1.63	2.53	3.94	6.21	9.78	15.4
Inductance	L	mH	0.52	0.84	1.3	2.1	3.3	5.3	8.3	13
Peak Current	I _{pk}	A	13	11	9.3	7.5	6.1	4.9	3.9	3.1
Electrical Time Constant	τ _e	ms	0.72	0.78	0.79	0.82	0.84	0.85	0.85	0.85
Mechanical Time Constant	τ _m	ms	11	9.9	9.7	9.3	9.2	9.1	9.0	9.0

¹Recorded at maximum winding temperature at 25°C ambient and without heatsink.



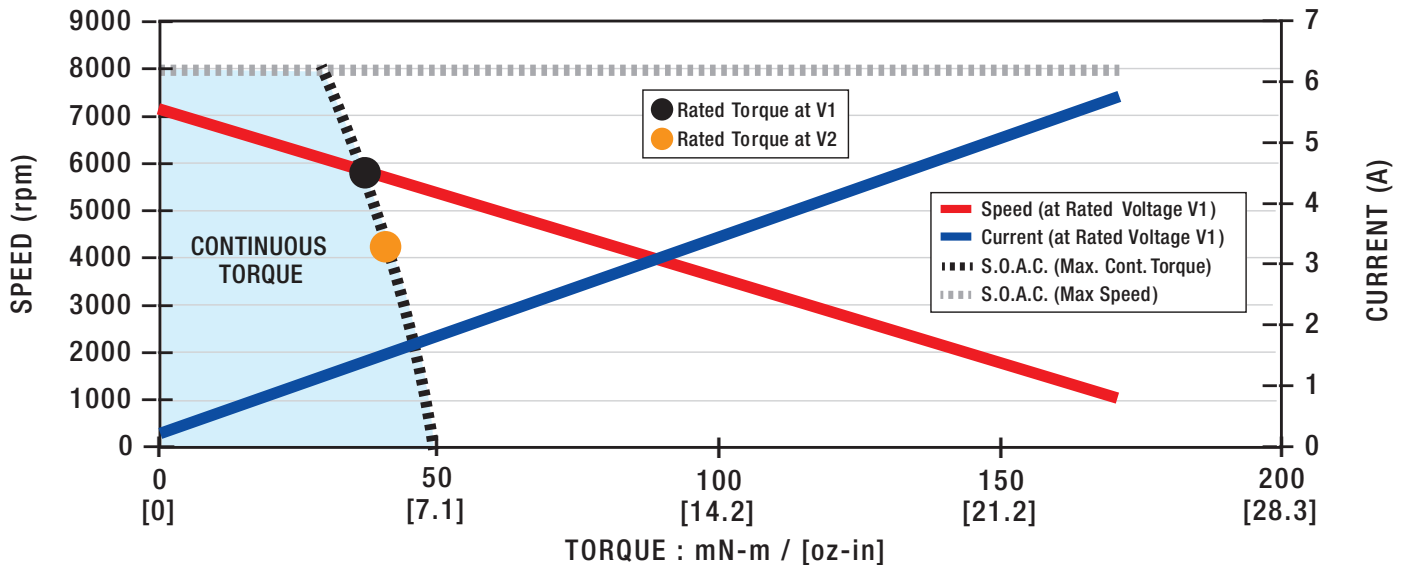
Motor Data		Units								
Rated Voltage V1	V_r	V	9.55	12.0	15.2	19.1	24.0	30.3	38.2	48.0
Rated Torque ¹ •	T_r	Nm	0.035	0.034	0.034	0.033	0.033	0.033	0.032	0.032
		oz-in	5.0	4.9	4.8	4.7	4.7	4.6	4.6	4.6
Rated Speed ¹	ω_r	rpm	5030	5170	5280	5450	5430	5480	5490	5490
Rated Current ¹	I_r	A	3.2	2.5	1.9	1.5	1.2	0.95	0.75	0.59
Rated Power ¹	P_r	W	19	19	19	19	19	19	19	19
No Load Speed	ω_{nl}	rpm	6050	6020	6000	6090	6030	6050	6040	6030
No Load Current	I_{nl}	A	0.41	0.33	0.26	0.21	0.17	0.13	0.11	0.081
Rated Voltage V2	V_r	V	7.58	9.55	12.0	15.2	19.1	24.0	30.3	38.2
		Nm	0.038	0.038	0.037	0.037	0.036	0.036	0.036	0.036
Rated Torque ¹ •	T_r	oz-in	5.4	5.3	5.3	5.2	5.2	5.1	5.1	5.1
		rpm	3460	3620	3690	3870	3870	3890	3910	3930
Rated Current ¹	I_r	A	3.4	2.7	2.1	1.7	1.3	1.0	0.81	0.65
Rated Power ¹	P_r	W	14	14	14	15	15	15	15	15
No Load Speed	ω_{nl}	rpm	4780	4770	4720	4830	4780	4780	4770	4780
No Load Current	I_{nl}	A	0.39	0.31	0.24	0.20	0.16	0.13	0.096	0.077
Motor Constant	K_M	Nm/ \sqrt{W}	0.019	0.020	0.021	0.021	0.021	0.021	0.021	0.021
		oz-in/ \sqrt{W}	2.7	2.8	2.9	3.0	3.0	3.0	3.0	3.0
Torque Constant	K_T	Nm/A	0.0144	0.0182	0.0232	0.0287	0.0365	0.0459	0.0581	0.0731
		oz-in/A	2.04	2.58	3.29	4.07	5.17	6.50	8.22	10.3
Voltage Constant	K_E	V/(rad/s)	0.0144	0.0182	0.0232	0.0287	0.0365	0.0459	0.0581	0.0731
		V/krpm	1.51	1.91	2.43	3.01	3.82	4.81	6.08	7.65
Terminal Resistance	R_{mt}	Ω	0.560	0.830	1.26	1.89	2.96	4.62	7.30	11.5
Inductance	L	mH	0.39	0.63	1.0	1.6	2.5	4.0	6.4	10
Peak Current	I_{pk}	A	17	14	12	10	8.1	6.6	5.2	4.2
Electrical Time Constant	τ_e	ms	0.70	0.76	0.81	0.83	0.85	0.86	0.87	0.87
Mechanical Time Constant	τ_m	ms	11	10	9.7	9.5	9.3	9.1	9.0	9.0

¹Recorded at maximum winding temperature at 25°C ambient and without heatsink.



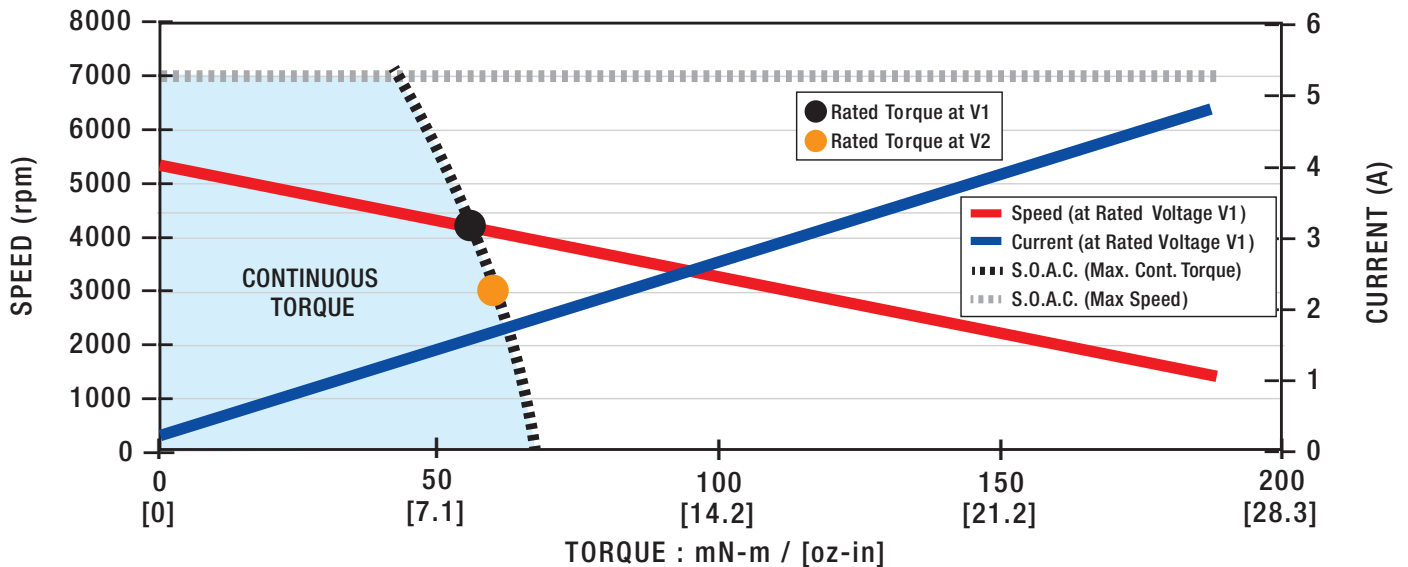
Motor Data		Units								
Rated Voltage V1	V_r	V	9.55	12.0	15.2	19.1	24.0	30.3	38.2	48.0
Rated Torque ¹ •	T_r	Nm	0.040	0.038	0.037	0.037	0.036	0.036	0.036	0.036
		oz-in	5.6	5.4	5.3	5.2	5.1	5.1	5.0	5.0
Rated Speed ¹	ω_r	rpm	5160	5480	5640	5660	5810	5810	5850	5820
Rated Current ¹	I_r	A	3.7	2.9	2.2	1.7	1.4	1.1	0.86	0.68
Rated Power ¹	P_r	W	22	22	22	22	22	22	22	22
No Load Speed	ω_{nl}	rpm	6180	6290	6290	6220	6320	6280	6310	6260
No Load Current	I_{nl}	A	0.47	0.38	0.30	0.24	0.19	0.15	0.12	0.094
Rated Voltage V2	V_r	V	7.58	9.55	12.0	15.2	19.1	24.0	30.3	38.2
Rated Torque ¹ •	T_r	Nm	0.043	0.042	0.042	0.041	0.041	0.040	0.040	0.040
		oz-in	6.1	6.0	5.9	5.8	5.7	5.7	5.7	5.7
Rated Speed ¹	ω_r	rpm	3560	3860	3960	4060	4170	4160	4200	4200
Rated Current ¹	I_r	A	3.9	3.1	2.4	1.9	1.5	1.2	0.94	0.74
Rated Power ¹	P_r	W	16	17	17	17	18	18	18	18
No Load Speed	ω_{nl}	rpm	4880	4990	4950	4940	5020	4960	4980	4970
No Load Current	I_{nl}	A	0.44	0.36	0.28	0.22	0.18	0.14	0.12	0.088
Motor Constant	K_M	Nm/ \sqrt{W}	0.020	0.021	0.022	0.023	0.023	0.023	0.023	0.023
		oz-in/ \sqrt{W}	2.9	3.0	3.1	3.2	3.2	3.3	3.3	3.3
Torque Constant	K_T	Nm/A	0.0141	0.0175	0.0222	0.0282	0.0349	0.0443	0.0557	0.0705
		oz-in/A	2.00	2.47	3.14	3.99	4.94	6.27	7.88	9.98
Voltage Constant	K_E	V/(rad/s)	0.0141	0.0175	0.0222	0.0282	0.0349	0.0443	0.0557	0.0705
		V/krpm	1.48	1.83	2.32	2.95	3.65	4.64	5.83	7.38
Terminal Resistance	R_{mt}	Ω	0.480	0.680	1.02	1.56	2.37	3.72	5.83	9.23
Inductance	L	mH	0.33	0.51	0.82	1.3	2.1	3.3	5.2	8.4
Peak Current	I_{pk}	A	20	18	15	12	10	8.1	6.6	5.2
Electrical Time Constant	τ_e	ms	0.69	0.75	0.80	0.85	0.86	0.89	0.89	0.90
Mechanical Time Constant	τ_m	ms	13	12	12	11	11	11	10	10

¹Recorded at maximum winding temperature at 25°C ambient and without heatsink.



Motor Data		Units								
Rated Voltage V1	V_r	V	9.55	12.0	15.2	19.1	24.0	30.3	38.2	48.0
Rated Torque ¹ •	T_r	Nm	0.059	0.057	0.056	0.056	0.055	0.055	0.055	0.055
		oz-in	8.3	8.1	8.0	7.9	7.8	7.8	7.8	7.8
Rated Speed ¹	ω_r	rpm	3730	3980	4090	4110	4210	4230	4250	4230
Rated Current ¹	I_r	A	4.0	3.2	2.5	1.9	1.6	1.2	0.96	0.76
Rated Power ¹	P_r	W	23	24	24	24	24	24	24	24
No Load Speed	ω_{nl}	rpm	4720	4810	4800	4750	4820	4800	4810	4780
No Load Current	I_{nl}	A	0.40	0.33	0.26	0.21	0.17	0.13	0.11	0.081
Rated Voltage V2	V_r	V	7.58	9.55	12.0	15.2	19.1	24.0	30.3	38.2
Rated Torque ¹ •	T_r	Nm	0.062	0.061	0.060	0.060	0.059	0.059	0.059	0.059
		oz-in	8.8	8.6	8.5	8.5	8.4	8.4	8.4	8.3
Rated Speed ¹	ω_r	rpm	2530	2770	2840	2920	3000	3000	3030	3030
Rated Current ¹	I_r	A	4.2	3.3	2.6	2.0	1.6	1.3	1.0	0.81
Rated Power ¹	P_r	W	16	18	18	18	19	19	19	19
No Load Speed	ω_{nl}	rpm	3730	3810	3770	3770	3820	3790	3800	3790
No Load Current	I_{nl}	A	0.39	0.31	0.25	0.20	0.16	0.13	0.097	0.077
Motor Constant	K_M	Nm/ \sqrt{W}	0.026	0.027	0.028	0.029	0.029	0.029	0.030	0.030
		oz-in/ \sqrt{W}	3.7	3.9	4.0	4.1	4.1	4.2	4.2	4.2
Torque Constant	K_T	Nm/A	0.0185	0.0229	0.0291	0.0370	0.0458	0.0582	0.0731	0.0925
		oz-in/A	2.62	3.25	4.12	5.23	6.49	8.24	10.4	13.1
Voltage Constant	K_E	V/(rad/s)	0.0185	0.0229	0.0291	0.0370	0.0458	0.0582	0.0731	0.0925
		V/krpm	1.94	2.40	3.05	3.87	4.80	6.09	7.66	9.69
Terminal Resistance	R_{mt}	Ω	0.500	0.710	1.07	1.64	2.49	3.91	6.14	9.72
Inductance	L	mH	0.43	0.66	1.1	1.7	2.6	4.2	6.7	11
Peak Current	I_{pk}	A	19	17	14	12	9.6	7.7	6.2	4.9
Electrical Time Constant	τ_e	ms	0.86	0.93	0.99	1.0	1.1	1.1	1.1	1.1
Mechanical Time Constant	τ_m	ms	10	9.5	8.9	8.5	8.4	8.2	8.1	8.0

¹Recorded at maximum winding temperature at 25°C ambient and without heatsink.



Motor Data		Units									
Rated Voltage V1	V_r	V	12.0	15.2	19.1	24.0	30.3	38.2	48.0	48.0	
Rated Torque ¹ •	T_r	Nm	0.071	0.070	0.069	0.068	0.068	0.068	0.068	0.068	0.072
		oz-in	10	9.9	9.8	9.7	9.6	9.6	9.6	9.6	10
Rated Speed ¹	ω_r	rpm	4260	4540	4590	4590	4730	4730	4720	3390	
Rated Current ¹	I_r	A	4.2	3.3	2.6	2.0	1.6	1.3	1.0	0.85	
Rated Power ¹	P_r	W	32	33	33	33	34	34	33	26	
No Load Speed	ω_{nl}	rpm	5210	5330	5290	5220	5330	5310	5270	4170	
No Load Current	I_{nl}	A	0.37	0.30	0.24	0.19	0.15	0.12	0.092	0.069	
Rated Voltage V2	V_r	V	9.55	12.0	15.2	19.1	24.0	30.3	38.2	38.2	
Rated Torque ¹ •	T_r	Nm	0.075	0.074	0.073	0.073	0.072	0.072	0.072	0.072	0.075
		oz-in	11	10	10	10	10	10	10	10	11
Rated Speed ¹	ω_r	rpm	2970	3170	3270	3290	3380	3390	3410	2360	
Rated Current ¹	I_r	A	4.4	3.5	2.7	2.1	1.7	1.4	1.1	0.88	
Rated Power ¹	P_r	W	23	25	25	25	26	26	26	19	
No Load Speed	ω_{nl}	rpm	4130	4200	4190	4150	4210	4200	4190	3310	
No Load Current	I_{nl}	A	0.35	0.28	0.22	0.18	0.14	0.11	0.087	0.066	
Motor Constant	K_M	Nm/ \sqrt{W}	0.029	0.030	0.030	0.031	0.031	0.031	0.032	0.032	
		oz-in/ \sqrt{W}	4.0	4.2	4.3	4.4	4.4	4.5	4.5	4.5	
Torque Constant	K_T	Nm/A	0.0212	0.0263	0.0333	0.0424	0.0524	0.0664	0.0840	0.106	
		oz-in/A	3.00	3.72	4.72	6.00	7.42	9.40	11.9	15.0	
Voltage Constant	K_E	V/(rad/s)	0.0212	0.0263	0.0333	0.0424	0.0524	0.0664	0.0840	0.106	
		V/krpm	2.22	2.75	3.49	4.44	5.49	6.95	8.80	11.1	
Terminal Resistance	R_{mt}	Ω	0.550	0.790	1.20	1.85	2.82	4.45	6.98	11.1	
Inductance	L	mH	0.49	0.75	1.2	2.0	3.0	4.9	7.7	12	
Peak Current	I_{pk}	A	22	19	16	13	11	8.6	6.9	4.3	
Electrical Time Constant	τ_e	ms	0.89	0.95	1.0	1.1	1.1	1.1	1.1	1.1	
Mechanical Time Constant	τ_m	ms	10	9.7	9.2	8.7	8.7	8.6	8.4	8.4	

¹Recorded at maximum winding temperature at 25°C ambient and without heatsink.

