

Motor Winding	M4-2003			M4-2004			M4-2005			M4-2006		
	F	A	C	A	C	R	A	C	F	A	C	M
Basic Motor Constants												
Power, P (W)	/	100	90	200	180	150	300	250	220	300	220	200
Max Speed, Nmax (rpm)	6,000	6,000	4,500	5,000	3,500	2,500	4,000	3,300	2,000	3,000	2,000	1,200
Peak Torque, Mmax (Nm)	1.3	2.1	2.3	2.6	3.5	4.2	3.2	4	5	4.3	6	8
Current @ Peak Torque, Ip (A)	18	18	15.3	18	18	18	18	18	18	18	18	18
Max Terminal Voltage, V _T (V)	60	90	90	90	90	90	90	90	90	90	90	90
Back EMF Const, Ke (V/krpm)	8.0	12.5	16.0	15.6	21.3	26.0	19.5	23.8	31.2	26.0	35.8	50.0
Torque Const., K _T (Nm/A)	0.075	0.118	0.151	0.148	0.201	0.246	0.184	0.225	0.295	0.246	0.339	0.473
DC Resistance, R (Ω)	1.1	2.9	4.4	1.5	2.8	4	1.1	1.8	3.4	1.3	2.7	5.3
Inductance, L (mH)	0.95	2.4	3.8	1.6	2.9	4.3	1.3	2.1	3.5	1.6	3	6
Weight, M (kg)	1.8			2.3			2.9			3.4		
Inertia, J _M (kgm ²)	0.75x10 ⁻⁴			1.28x10 ⁻⁴			1.85x10 ⁻⁴			2.40x10 ⁻⁴		
Static Friction, T _F (Nm)	0.03			0.04			0.045			0.05		
Viscous Damping, F ₁ (Nm/krpm)	0.005			0.01			0.015			0.02		
Motor without Tachogenerator												
Cont. Torque M ₀ (Nm)	0.43	0.45	0.45	0.9	0.9	0.9	1.2	1.15	1.15	1.6	1.6	1.6
Current @ Cont. Torque, I ₀ (A)	6.0	3.9	3.1	6.3	4.6	3.8	6.7	5.2	4	6.7	4.8	3.5
Motor with Tachogenerator												
Cont. Torque M ₀ (Nm)	0.38	0.4	0.4	0.85	0.85	0.85	1.15	1.1	1.1	1.5	1.5	1.5
Current @ Cont. Torque, I ₀ (A)	5.3	3.5	2.75	6	4.4	3.6	6.5	5	3.9	6.3	4.6	3.3
Tachogenerator Option												
Tachogenerator Model	TGF 1568			TGF 1568			TGF 1568			TGF 1568		
Voltage, K _G (V/krpm)	3.0 / 7.0			3.0 / 7.0			3.0 / 7.0			3.0 / 7.0		
Ripple (pk-pk/avg)	3%			3%			3%			3%		
Inertia, J _T (kgm ²)	0.14x10 ⁻⁴			0.14x10 ⁻⁴			0.14x10 ⁻⁴			0.14x10 ⁻⁴		
Weight, M _T (kg)	0.6			0.6			0.6			0.6		
Encoder Option												
Encoder Type	Incremental (A quad B with index Z & complements)											
Power Supply	5 V DC, ±5%, 200 mA max											
Output	Line Driver, 20mA max sink/source											
Resolution (ppr)	1024 / 2048 / 4096			1024 / 2048 / 4096			1024 / 2048 / 4096			1024 / 2048 / 4096		
Frequency Response	200 kHz Max.											
Brake Option												
Brake Open Voltage (Volts D.C.)	24											
Power (Watts)	10											
Brake Static Torque (Nm)	2.0											
Weight (brake + housing) Kg	0.8											