

DB-3000 MATRIX SERIES SPECIFICATIONS

MOTOR CHARACTERISTICS @ 25° C

Specification	Units	DB-3000 F-1ES	DB-3000 G-1ES	DB-3000 H-1ES	DB-3000 J-1ES	DB-3000 K-1ES	DB-3000 L-1ES
Peak Torque, T_P	oz-in	151	302	545	604	909	1214
Motor Constant, K_M	oz-in / \sqrt{W}	10.4	18.7	25.8	31.8	42.4	51.3
Number of Poles		12	12	12	12	12	12
Number of Phases		3"Y"	3"Y"	3"Y"	3"Y"	3"Y"	3"Y"
Weight	oz (nom)	8.5	15	18	22	31	41
Motor Inertia, J_M	oz-in-s ²	2.11E-03	4.17E-03	6.25E-03	8.32E-03	1.17E-02	1.58E-02
Friction Torque, T_F	oz-in	3.0	5.0	8.0	10	16	20
Electrical Time Constant, T_E	ms	0.7	1.1	1.4	1.6	1.9	2.1
Mechanical Time Constant, T_M	ms	2.75	1.69	1.33	1.16	0.92	0.85
*Temperature Rise, TPR'	°C / W	6.3	5.0	4.1	3.5	2.7	2.2
Sensors		No	No	No	No	No	No

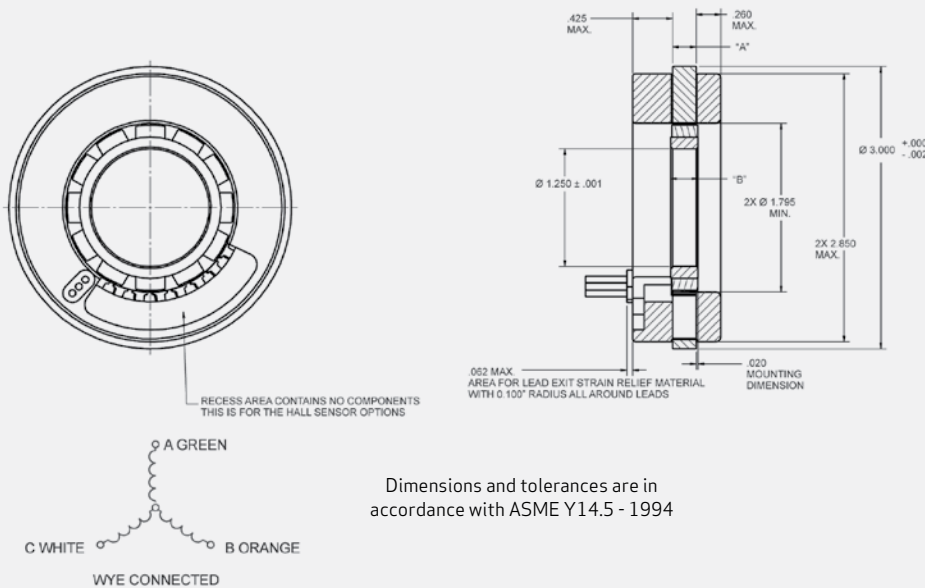
MOTOR WINDING CONSTANTS

Specification	Units	DB-3000 F-1ES	DB-3000 G-1ES	DB-3000 H-1ES	DB-3000 J-1ES	DB-3000 K-1ES	DB-3000 L-1ES
**Torque Sensitivity, K_T	oz-in/amp \pm 10%	15.1	30.2	45.4	60.4	90.9	121
Back EMF, K_E	V per rad/s \pm 10%	0.107	0.213	0.321	0.427	0.642	0.855
Terminal Resistance, R_M	ohms \pm 10%	2.11	2.61	3.10	3.60	4.59	5.59
Terminal Inductance, L_M	mH \pm 30%	1.4	2.9	4.3	5.7	8.6	11
Voltage, Stalled at Peak Torque, V_P	volts	21.1	26.1	31.0	36.0	45.9	55.9
Amps at Peak Torque, I_P	amps	10	10	10	10	10	10

*TPR as listed on the data sheets, is for an un-mounted condition unless otherwise noted. Mounted TPR values are often 50% or less than the un-mounted TPR. For air flow, the TPR may be less than 25% the un-mounted amount and for fluid cooling it may be 10% or less. Many factors affect the TPR value and its change relative to the mounting or external cooling applied. Consult the factory for an more accurate estimate of the motor's TPR.

**Stack lengths from 0.10 to 6.00 inches (2.54 to 125.4 mm) with K_T to 32.5 N.m/amp. Consult factory for additional designs. Refer to our online documentation for product updates.

MECHANICAL DIMENSIONS (INCHES)



MOUNTING DIMENSIONS

Modular	"A" Inches	"B" Inches
DB-3000-F-1ES	.250	.290
DB-3000-G-1ES	.500	.565
DB-3000-H-1ES	.750	.845
DB-3000-J-1ES	1.000	1.120
DB-3000-K-1ES	1.500	1.570
DB-3000-L-1ES	2.00	2.125