

DB-14540 Matrix Series Specifications

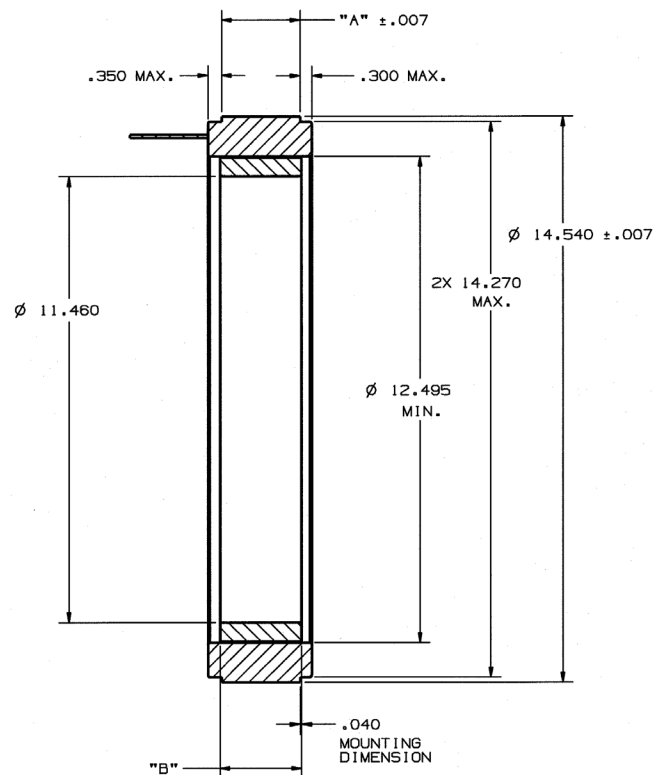
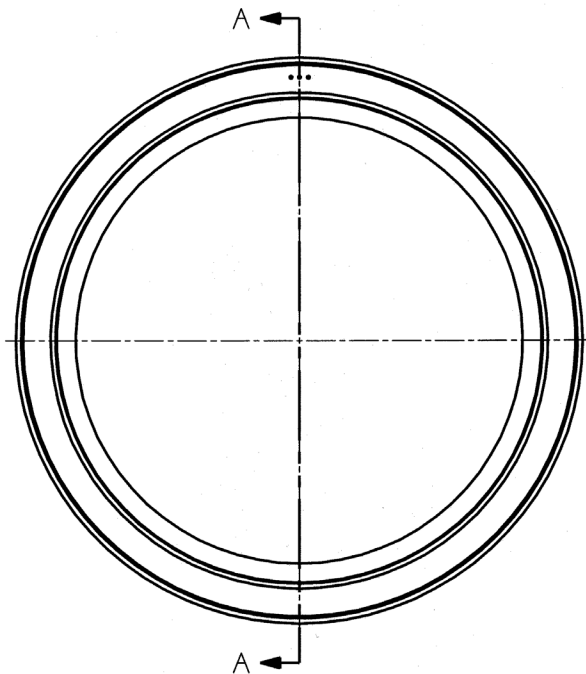
DB-14540 SERIES SPECIFICATIONS @ 25°C

Part Number		DB-14540-A-1ES	DB-14540-B-1ES	DB-14540-C-1ES	DB-14540-D-1ES	DB-14540-E-1ES
Size Constants						
	Units					
Peak Torque, T_p	oz-in	21674	43273	67041	86523	108319
Motor Constant, K_M	oz-in/ \sqrt{W}	324	579	812	976	1142
Number of Poles		32	32	32	32	32
Number of Phases		3"Y"	3"Y"	3"Y"	3"Y"	3"Y"
Weight	oz (nom)	171	312	464	584	720
Motor Inertia, J_M	oz-in-s ²	5.22	8.52	13.7	17.0	20.8
Friction Torque, T_F	oz-in	64	128	200	256	320
Electrical Time Constant, τ_E	ms	1.03	1.66	2.09	2.35	2.55
Mechanical Time Constant, τ_M	ms	7.05	3.59	2.95	2.53	2.26
*Temperature Rise, Housed TPR'	°C/W	0.74	0.57	0.46	0.39	0.34
Sensors		No	No	No	No	No
Winding Constants						
	Units					
**Torque Sensitivity, K_T	oz-in/amp	639	1265	1955	2515	3149
Back EMF, K_E	V per rad/s	4.52	8.94	13.8	17.8	22.2
Terminal Resistance, R_M	ohms (nom)	3.90	4.77	5.80	6.64	7.60
Terminal Inductance, L_M	mH (nom)	4.0	7.9	12	16	19
Voltage, Stalled at Peak Torque, V_p	volts	132	163	199	228	261
Amps at Peak Torque, I_p	amps	33.9	34.2	34.3	34.4	34.4

*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 0.25 to 30.00 inches (6.35 to 762 mm) with K_T to 4266 N.m/amp

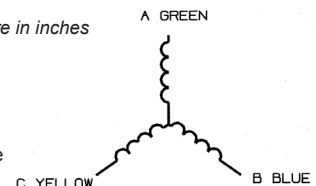
DB-14540 Series Typical Outline Drawing



Dimensions are in inches

Modular	"A"	"B"	"C"
	inches	inches	inches
DB-14540-A-1ES	0.520	0.715	1.20
DB-14540-B-1ES	1.020	1.165	1.700
DB-14540-C-1ES	1.570	1.873	2.250
DB-14540-D-1ES	2.020	2.323	2.700
DB-14540-E-1ES	2.520	2.839	3.200

Dimensions and tolerances are in accordance with ASME Y14.5 - 1994



REVISED 04/2015