

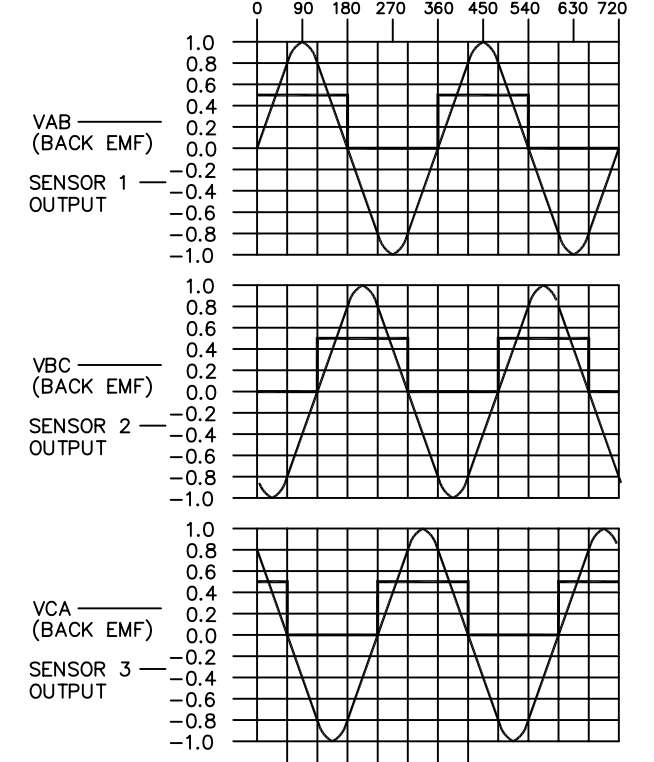
LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
B	94-1469	UPDATE OVERALL MAX. DIM	SLM	HP	12/02/94
C	070564	ADD WAVEFORM	SLM	BD	09/18/07

WINDING CONSTANTS	UNITS	TOL	SYM	WDG A	WDG B	WDG C	WDG D	WDG E
DC RESISTANCE	OHMS	±12.5%	R	1.3	2.1	3.3	5.2	8.3
VOLTAGE @ T _p	VOLTS	NOMINAL	V _p	9.1	11.8	14.9	18.7	23.7
CURRENT @ T _p	AMPERES	NOMINAL	I _p	7.0	5.6	4.5	3.6	2.9
TORQUE SENSITIVITY	OZ IN/AMP	±10%	K _T	2.0	2.5	3.1	3.9	4.9
BACK EMF CONSTANT	VOLTS/(RAD/SEC)	±10%	K _B	0.014	0.018	0.022	0.028	0.035
INDUCTANCE	MILLIHENRY	±30%	L	0.68	1.1	1.7	2.7	4.3

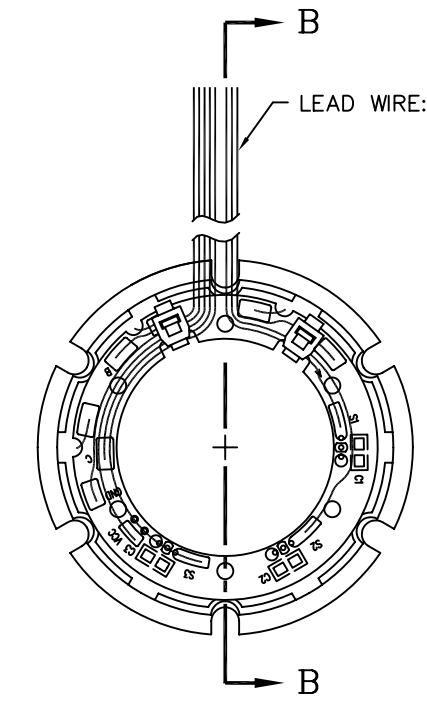
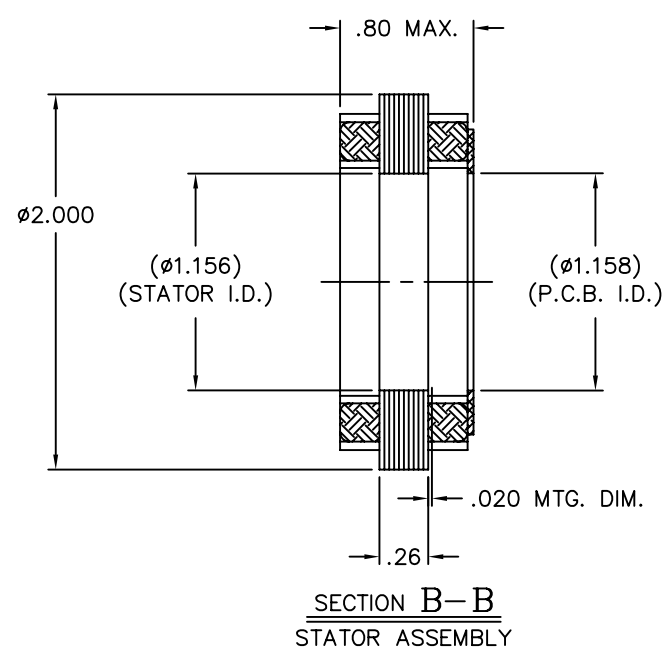
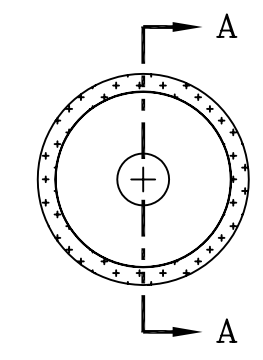
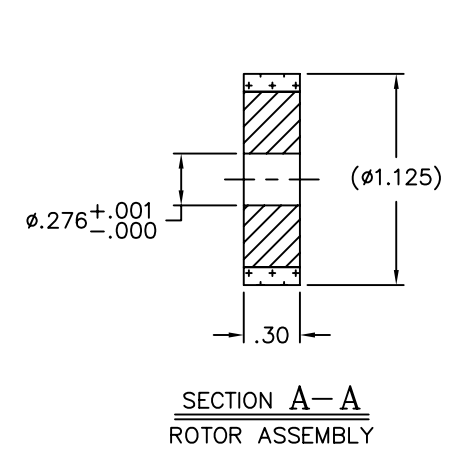
MOTOR PARAMETERS	UNITS	SYM	NOM. VALUE
PEAK TORQUE *	OZ IN	T _p	14.0
CONTINUOUS STALL TORQUE **	OZ IN	T _{CS}	4.2
MOTOR CONSTANT	OZ IN/√WATT	K _M	1.7
ELECTRICAL TIME CONSTANT	MILLISECOND	τ _E	0.52
MECHANICAL TIME CONSTANT	MILLISECOND	τ _M	21.0
POWER I ² R @ T _p	WATTS	P _p	67.3
DAMPING FACTOR (ZERO IMPEDANCE)	OZ IN/(RAD/SEC)	F ₀	0.021
BREAKAWAY TORQUE	OZ IN	T _F	0.7
ROTOR INERTIA	OZ IN SEC ²	J _M	4.6x10 ⁻⁴
MAX ALLOWABLE SPEED	RPM	S _M	14,000
SPEED @ OZ-IN & VDC	RPM	S _L	
THEO ACC @ T _p	RAD/SEC ²	α _T	3x10 ⁴
THERMAL RESISTANCE ***	°C/WATT	θ _{TH}	12.0
MAX ALLOWABLE WINDING TEMP	°C	TEMP	155
NUMBER OF PHASES/WINDING TYPE			3/Y
NUMBER OF POLES			8
WEIGHT	OZ	W _T	2.1

* 10 SEC @ 25°C AMBIENT TEMP
 ** 25°C AMBIENT, 155° WINDING TEMP
 *** WITH ALUMINUM HOUSING HEATSUNK TO 8 X 8 X 1/8 INCH ALUMINUM PLATE

BACK EMF AND SENSOR WAVEFORMS
 (ROTATION OF MOTOR = COUNTER CLOCKWISE FACING LEAD SIDE)



MOTOR LEADS	A	B	C	1	2	3	4	5	6
A	RED	+	+	-	-				
B	BLK	-	-	+	+				
C	GRN			-	-	+	+		
1	BRN	1	1	0	0	0	0	1	
2	BLU	0	1	1	1	0	0		
3	ORG	0	0	0	1	1	1		
Vcc+	YEL								
GND	GRY								



LEAD WIRE: PVC UL #1061 80°C
 3x #22 AWG
 5x #28 AWG
 12.0 MIN. LONG

Proprietary rights of BEI Kimco are involved in the subject matter of this material and all manufacturing, reproduction, use, and sales pertaining to such subject matter are expressly reserved. This confidential and proprietary document is submitted for a specified purpose, and the recipient by accepting this material agrees that this material will not be used, copied, or reproduced in whole or in part nor its contents revealed in any manner or to any person except to meet the purpose for which it was delivered.

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED:
 -ALL DIMENSIONS ARE IN INCHES
 -BREAK SHARP EDGES .015 MAX.
 -SURFACE ROUGHNESS √63
 -DIMENSIONS APPLY AFTER FINISH
 -MAX FILLET R .010

TOLERANCES:
 DECIMALS ANGULAR
 .X ± .03 ±0° 30'
 .XX ± .01
 .XXX ± .005

DO NOT SCALE DRAWING

BEI KIMCO MAGNETICS DIVISION
 VISTA, CA 92081

DRAWN R. ELLIOTT	DATE 07/31/89	TITLE BLDC MOTOR PART SET	
MECH CHECK McGHEE	09/18/07	SIZE B	FSCM NO. 55789
APPD HA PHAM	07/31/89	DWG NO. DIP20-06-HPZ(LTR)	REV C
FILE NO. M:\TOPLEVEL\DIP\...	SCALE 1/1	SHEET 1 OF 1	