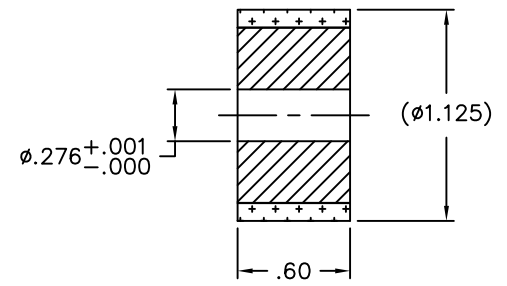


LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
D	070564	ADD WAVEFORM	SLM	BD	09/18/07
E	130078	ADD RoHS COMPLIANCY LOGO	SLM	BD	03/27/13

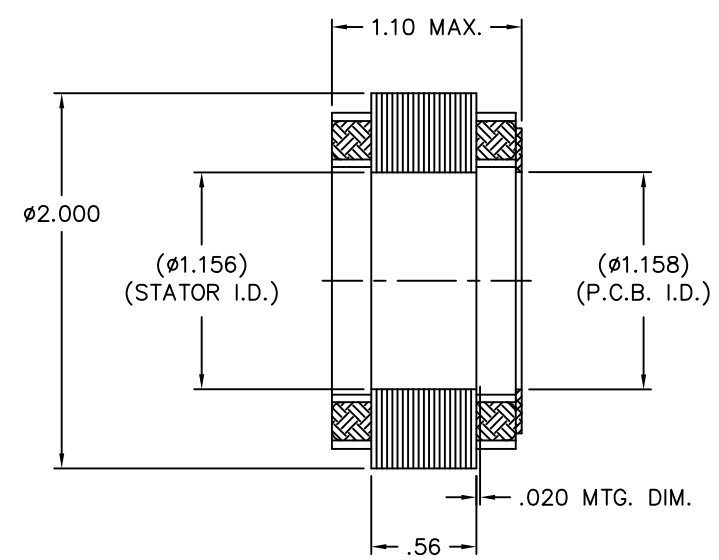
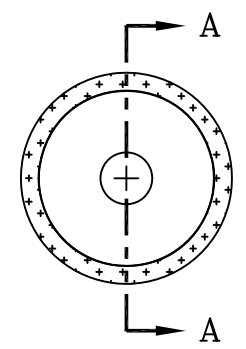
WINDING CONSTANTS *	UNITS	TOL	SYM	WDG A	WDG B	WDG C	WDG D	WDG E
DC RESISTANCE	OHMS	±12.5%	R	1.9	4.6	11.5	18.1	45.6
VOLTAGE @ T <sub>p</sub>	VOLTS	NOMINAL	V <sub>p</sub>	18.2	28.7	46.2	58.1	93.4
CURRENT @ T <sub>p</sub>	AMPERES	NOMINAL	I <sub>p</sub>	9.6	6.2	4.0	3.2	2.0
TORQUE SENSITIVITY	OZ-IN/AMP	±10%	K <sub>T</sub>	4.5	6.9	10.7	13.4	21.0
BACK EMF CONSTANT	VOLTS/(RAD/SEC)	±10%	K <sub>B</sub>	0.032	0.049	0.076	0.095	0.148
INDUCTANCE	MILLIHENRY	±30%	L	0.95	2.3	5.8	9.1	22.8

MOTOR PARAMETERS *	UNITS	SYM	NOM. VALUE
PEAK TORQUE	OZ-IN	T <sub>p</sub>	43.0
CONTINUOUS STALL TORQUE **	OZ-IN	T <sub>CS</sub>	9.5
MOTOR CONSTANT	OZ-IN/√WATT	K <sub>M</sub>	3.3
ELECTRICAL TIME CONSTANT	MILLISECOND	τ <sub>E</sub>	0.50
MECHANICAL TIME CONSTANT	MILLISECOND	τ <sub>M</sub>	12.3
POWER I <sup>2</sup> R @ T <sub>p</sub>	WATTS	P <sub>p</sub>	173.5
DAMPING FACTOR (ZERO IMPEDANCE)	OZ-IN/(RAD/SEC)	F <sub>0</sub>	0.076
BREAKAWAY TORQUE	OZ-IN	T <sub>F</sub>	1.2
ROTOR INERTIA	OZ-IN SEC <sup>2</sup>	J <sub>M</sub>	9.1x10 <sup>-4</sup>
MAX ALLOWABLE SPEED	RPM	S <sub>M</sub>	12,000
SPEED @ OZ-IN & VDC	RPM	S <sub>L</sub>	
THEO ACC @ T <sub>p</sub>	RAD/SEC <sup>2</sup>	α <sub>T</sub>	4.4x10 <sup>4</sup>
THERMAL RESISTANCE ***	°C/WATT	θ <sub>TH</sub>	9.5
MAX ALLOWABLE WINDING TEMP	°C	TEMP	155
NUMBER OF PHASES/WINDING TYPE			3/Y
NUMBER OF POLES			8
WEIGHT	OZ	W <sub>T</sub>	4.5

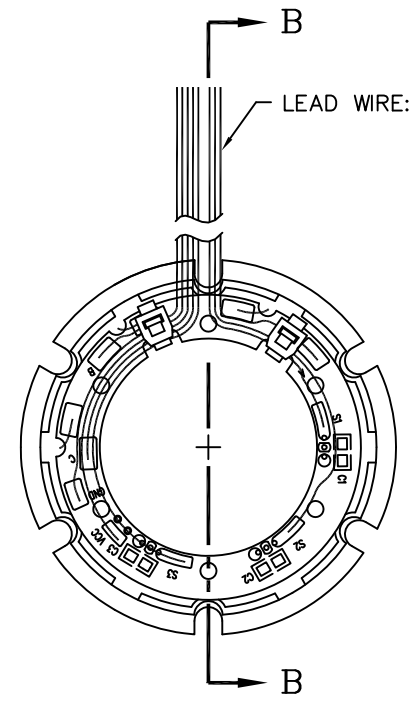
\* 25°C AMBIENT TEMP  
 \*\* 25°C AMBIENT, 155° WINDING TEMP  
 \*\*\* WITH ALUMINUM HOUSING HEATSUNK TO 8 X 8 X 1/8 INCH ALUMINUM PLATE



SECTION A-A  
ROTOR ASSEMBLY

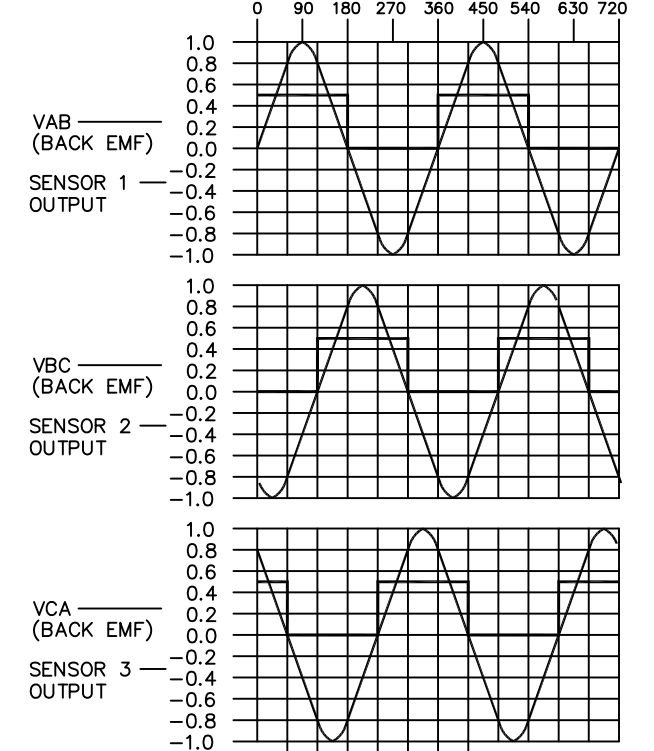


SECTION B-B  
STATOR ASSEMBLY



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

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								

THESE COMMODITIES, TECHNOLOGY OR SOFTWARE IF EXPORTED FROM THE UNITED STATES SHALL BE IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW IS PROHIBITED.

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

DO NOT SCALE DRAWING

**BEI KIMCO MAGNETICS DIVISION**  
 VISTA, CA 92081

DRAWN <b>R. ELLIOTT</b>	DATE 09/21/92	TITLE <b>BLDC MOTOR PART SET</b>		
MECH CHECK <b>McGHEE</b>	DATE 09/18/07	SIZE <b>B</b>	FSCM NO. 55789	DWG NO. DIP20-09-HPZ(LTR)
APPD <b>HA PHAM</b>	DATE 09/23/92	SCALE 1/1	REV <b>E</b>	SHEET 1 OF 1
FILE NO. M:\TOPLEVEL\DIP\...				

