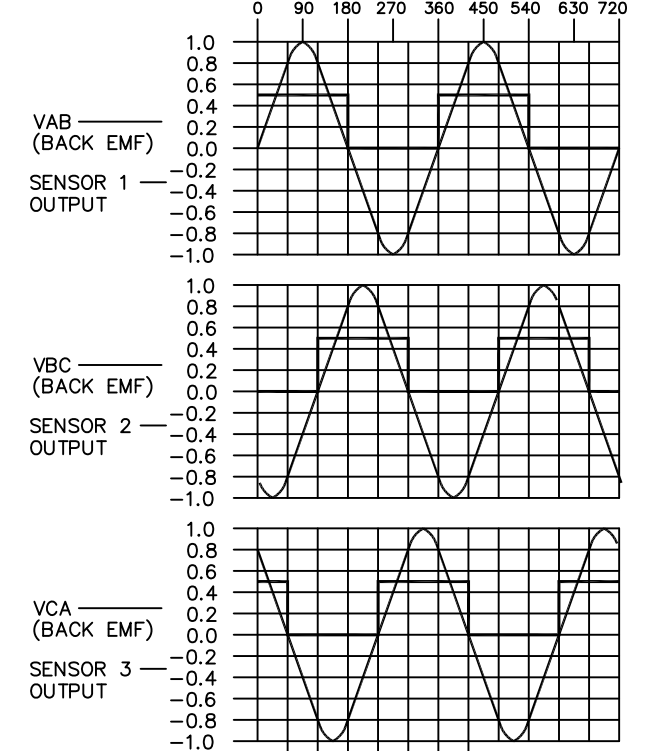


WINDING CONSTANTS *	UNITS	TOL	SYM	WDG A
DC RESISTANCE	OHMS	±12.5%	R	3.6
VOLTAGE @ T <sub>p</sub>	VOLTS	NOMINAL	V <sub>p</sub>	37.0
CURRENT @ T <sub>p</sub>	AMPERES	NOMINAL	I <sub>p</sub>	9.26
TORQUE SENSITIVITY	OZ-IN/AMP	±10%	K <sub>T</sub>	27.0
BACK EMF CONSTANT	VOLTS/(RAD/SEC)	±10%	K <sub>B</sub>	0.191
INDUCTANCE	MILLIHENRY	±30%	L	5.2

MOTOR PARAMETERS *	UNITS	SYM	NOM. VALUE
PEAK TORQUE	OZ-IN	T <sub>p</sub>	250.0
CONTINUOUS STALL TORQUE **	OZ-IN	T <sub>CS</sub>	54.0
MOTOR CONSTANT	OZ-IN/√WATT	K <sub>M</sub>	13.5
ELECTRICAL TIME CONSTANT	MILLISECOND	τ <sub>E</sub>	1.4
MECHANICAL TIME CONSTANT	MILLISECOND	τ <sub>M</sub>	1.9
POWER I <sup>2</sup> R @ T <sub>p</sub>	WATTS	P <sub>p</sub>	368.7
DAMPING FACTOR (ZERO IMPEDANCE)	OZ-IN/(RAD/SEC)	F <sub>0</sub>	1.197
BREAKAWAY TORQUE	OZ-IN	T <sub>F</sub>	3.0
ROTOR INERTIA	OZ-IN SEC <sup>2</sup>	J <sub>M</sub>	2.3x10 <sup>-3</sup>
MAX ALLOWABLE SPEED	RPM	S <sub>M</sub>	15,000
SPEED @ 52 OZ-IN & 270 VDC	RPM	S <sub>L</sub>	11,000
THEO ACC @ T <sub>p</sub>	RAD/SEC <sup>2</sup>	α <sub>T</sub>	1.1x10 <sup>5</sup>
THERMAL RESISTANCE ***	°C/WATT	θ <sub>TH</sub>	4.0
MAX ALLOWABLE WINDING TEMP	°C	TEMP	155
NUMBER OF PHASES/WINDING TYPE			3/Δ
NUMBER OF POLES			4
WEIGHT	OZ	W <sub>T</sub>	TBD

\* 25°C AMBIENT TEMP  
 \*\* 25°C AMBIENT, 155° WINDING TEMP  
 \*\*\* WITH 8 X 8 X 1/8 THICK AL HEAT SINK

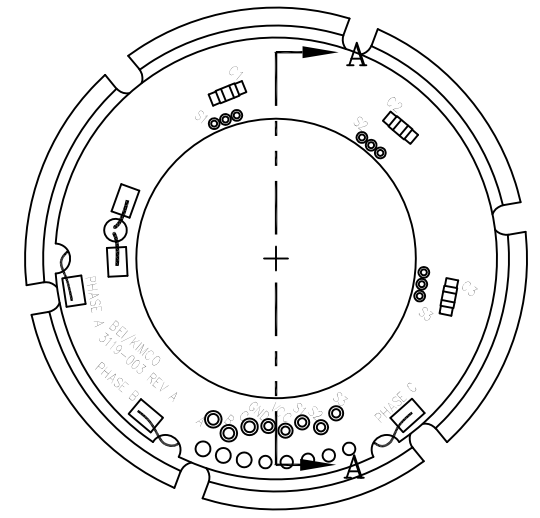
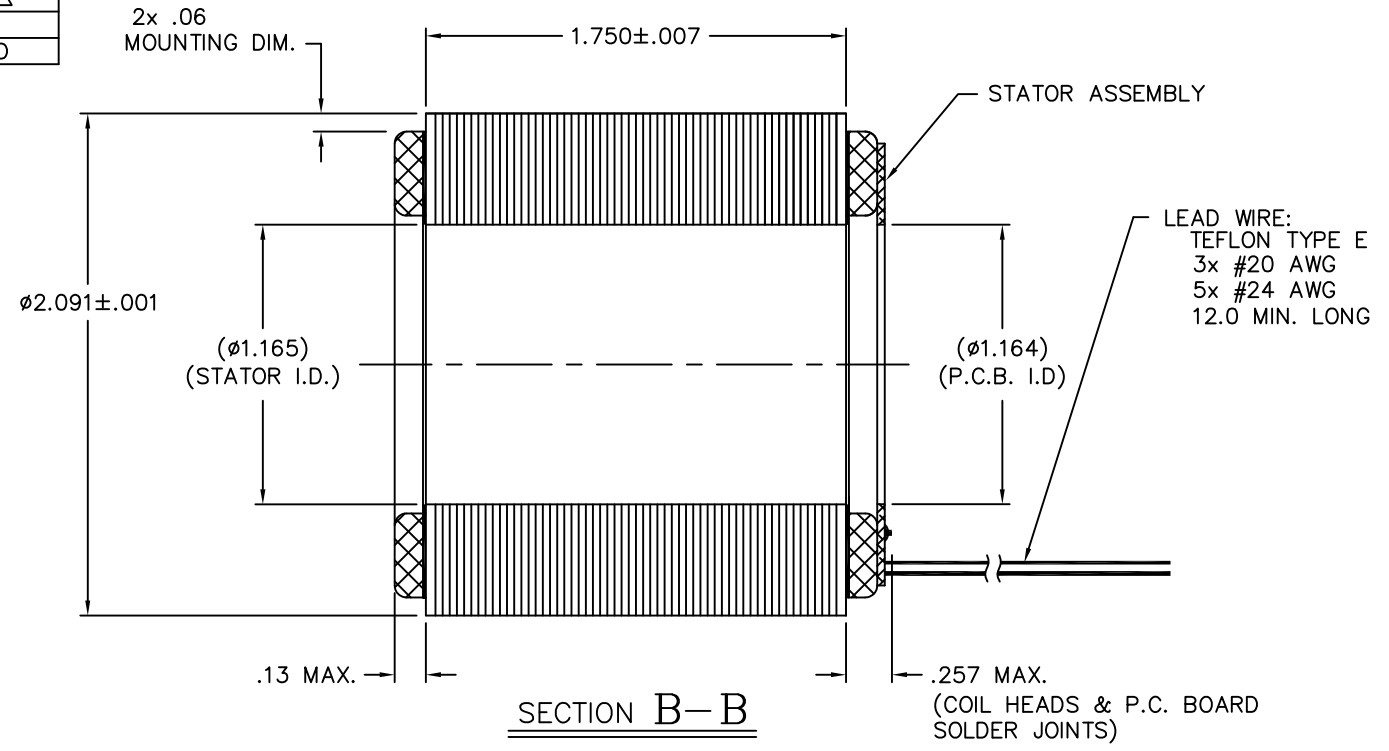
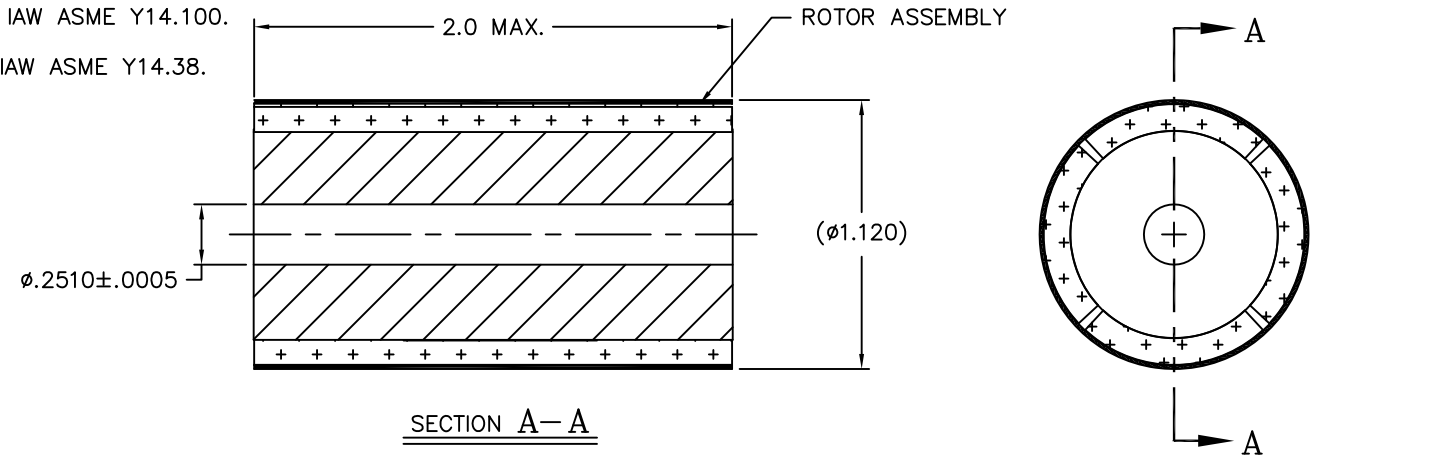
BACK EMF AND SENSOR WAVEFORMS  
 (ROTATION OF MOTOR = COUNTER CLOCKWISE FACING LEAD SIDE)



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

- NOTES: UNLESS OTHERWISE SPECIFIED
1. INTERPRET DIMENSIONING AND TOLERANCING IAW ASME Y14.5M-1994.
  2. INTERPRET DRAWING IAW ASME Y14.100.
  3. ALL ABBREVIATIONS IAW ASME Y14.38.

LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
X1	110xxx	INITIAL RELEASE	JWT		



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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 J. THOMPSON	DATE 11/28/11	TITLE BLDC MOTOR PART SET		
MECH CHECK		SIZE B	FSCM NO. 55789	DWG NO. DIP21-22-002A
APPD		SCALE 1/1	REV X1	SHEET 1 OF 1
FILE NO. M:\TOPLEVEL\DIP\...				