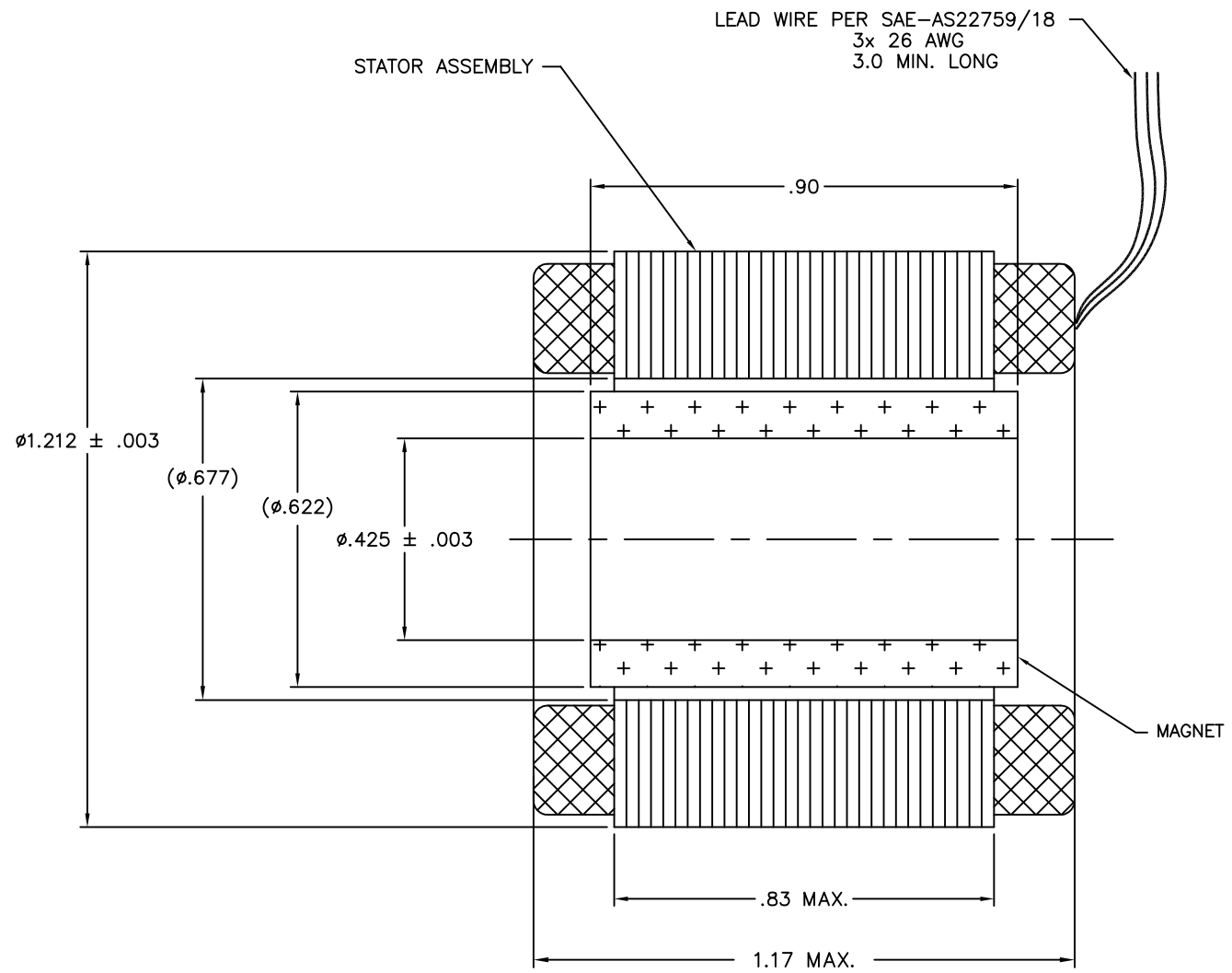
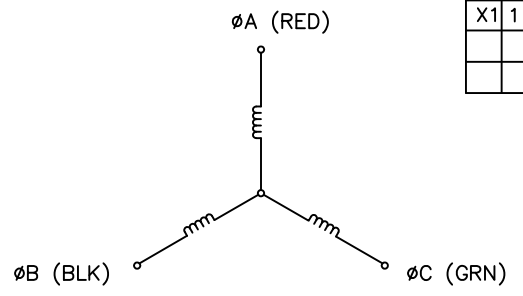
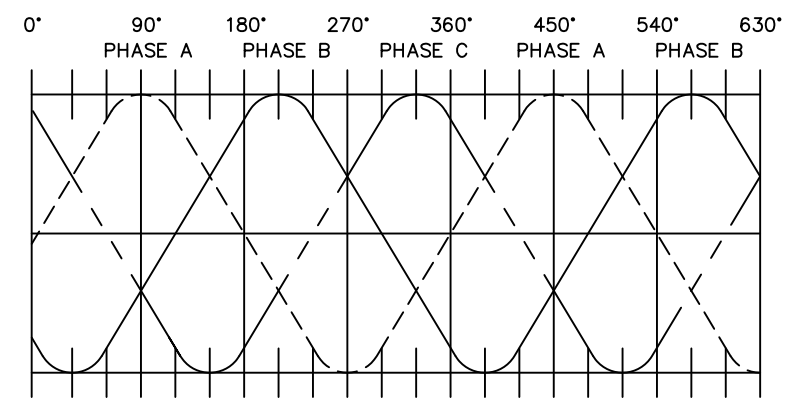


WINDING CONSTANTS*	UNITS	TOL	SYM	WDG A
DC RESISTANCE	OHMS	±12.5%	R	2.4
VOLTAGE @ PEAK TORQUE	VOLTS	NOMINAL	Vp	19.5
CURRENT @ PEAK TORQUE	AMPERES	NOMINAL	Ip	7.5
TORQUE SENSITIVITY ***	OZ-IN/AMP	±10%	Kt	3.04
BACK EMF CONSTANT	VOLTS/(RAD/SEC)	±10%	Kb	0.021
INDUCTANCE	MILLIHENRY	±30%	L	0.8

MOTOR PARAMETERS*	UNITS	SYM	VALUE
PEAK TORQUE	OZ-IN	Tp	22.8
CONTINUOUS STALL TORQUE **	OZ-IN	Tcs	7.4
MOTOR CONSTANT	OZ-IN/√WATT	Km	2.0
ELECTRICAL TIME CONSTANT	MILLISECOND	Te	0.33
MECHANICAL TIME CONSTANT	MILLISECOND	Tm	3.31
POWER I <sup>2</sup> R @ Tp	WATTS	Pp	
DAMPING FACTOR (ZERO IMPEDANCE)	OZ-IN/(RAD/SEC)	Fo	0.028
FRICTION TORQUE	OZ-IN	Tf	
ROTOR INERTIA	OZ-IN SEC <sup>2</sup>	Jm	9.0x10 <sup>-5</sup>
THEO. NO-LOAD SPEED @ Vp	RPM	So	10,000
SPEED @ 7 OZ-IN & 12 VDC	RPM	Si	2,000
THEO. ACCERATION @ Tp	RAD/SEC <sup>2</sup>	αT	2.7x10 <sup>5</sup>
THERMAL RESISTANCE	°C/WATT	ΘTH	
MAX ALLOWABLE WINDING TEMP	°C	TEMP	105
PHASES/WINDING TYPE			3/Y
POLES			4
WEIGHT	OZ	Wt	2.5

\* 25°C AMBIENT TEMP  
 \*\* 25°C AMBIENT, 105° WINDING TEMP  
 \*\*\* PEAK OF SINUSOIDAL TORQUE FUNCTION

DIRECTION OF ROTATION  
 CW VIEWED FROM LEAD SIDE



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 10/21/11	TITLE BRUSHLESS DC MOTOR
MECH CHECK		
APPD		
FILE NO. M:\TOP\DIP\DIP13-12-012A	SIZE C	FSCM NO. 55789
	DWG NO. DIP13-12-012A	REV X1
	SCALE 2/1	SHEET 1 OF 1

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