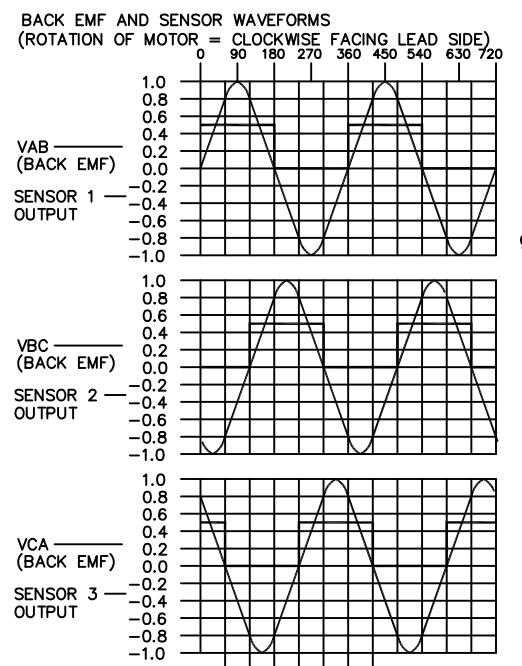


WINDING CONSTANTS *	UNITS	TOL	SYMBOL	WDG A
DC RESISTANCE	OHMS	±12.5%	R	0.63
VOLTAGE @ T <sub>p</sub>	VOLTS	NOMINAL	V <sub>p</sub>	19.0
CURRENT @ T <sub>p</sub>	AMPERES	NOMINAL	I <sub>p</sub>	12.5
TORQUE SENSITIVITY	OZ-IN/AMP	±10%	K <sub>T</sub>	39.65
	Nm/AMP	±10%		0.28
BACK EMF CONSTANT	V/(RAD/SEC)	±10%	K <sub>B</sub>	0.28
INDUCTANCE @ 1 KHz	MILLI-HENRY	±30%	L	1.48

LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
P1	1200XX	PRELIMINARY RELEASE	JWT		

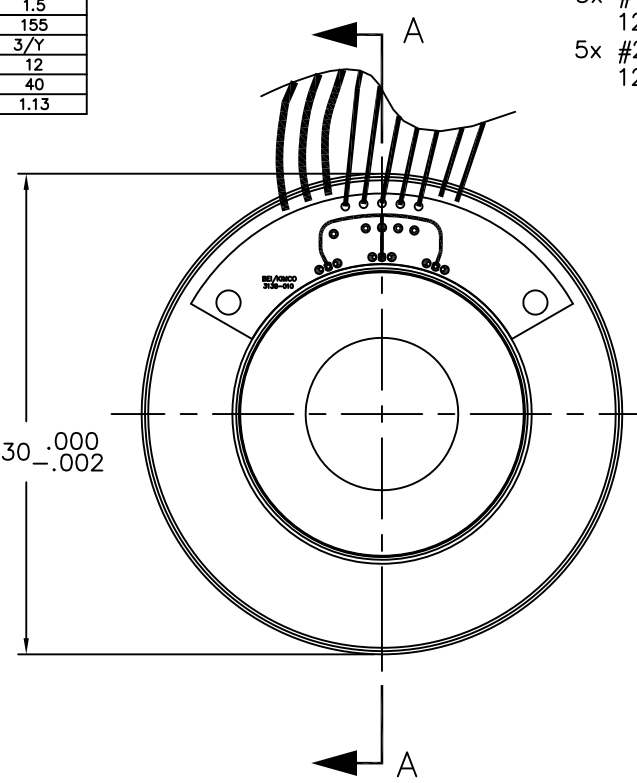
MOTOR PARAMETERS *	UNITS	SYMBOL	NOM. VALUE
PEAK TORQUE @ 250 RPM	OZ-IN	T <sub>p</sub>	496
	Nm		3.50
CONTINUOUS STALL TORQUE **	OZ-IN	T <sub>cs</sub>	380
	Nm		2.68
MOTOR CONSTANT	OZ-IN/√WATT	K <sub>M</sub>	50.0
	Nm/√WATT		0.353
ELECTRICAL TIME CONSTANT	MILLI-SEC	τ <sub>E</sub>	2.35
MECHANICAL TIME CONSTANT	MILLI-SEC	τ <sub>M</sub>	1.65
POWER I <sup>2</sup> R @ T <sub>p</sub>	WATTS	P <sub>p</sub>	98.4
DAMPING FACTOR (ZERO IMPEDANCE)	OZ-IN/(RAD/SEC)	F <sub>o</sub>	17.6
	Nm/(RAD/SEC)		0.124
FRICTION TORQUE	OZ-IN	T <sub>F</sub>	8.1
	Nm		0.057
ROTOR INERTIA	OZ-IN-SEC <sup>2</sup>	J <sub>M</sub>	0.029
	Kgm <sup>2</sup>		2.05x10 <sup>-4</sup>
THEO. NO-LOAD SPEED @ 19 VDC	RPM	S <sub>o</sub>	648.1
THEORETICAL ACCELERATION @ T <sub>p</sub>	RAD/SEC <sup>2</sup>	α <sub>T</sub>	1.71x10 <sup>4</sup>
THERMAL RESISTANCE	°C/WATT	θ <sub>TH</sub>	1.5
MAX. ALLOWABLE WINDING TEMP.	°C	TEMP	155
NUMBER OF PHASES/WINDING TYPE			3/Y
NUMBER OF POLES			12
WEIGHT	KG	W <sub>T</sub>	40
			1.13

\* 25°C AMBIENT TEMP  
 \*\* 25°C AMBIENT, 155°C WINDING TEMP  
 \*\*\* WITH 7" x 7" x .25" THK ALUM HEAT SINK

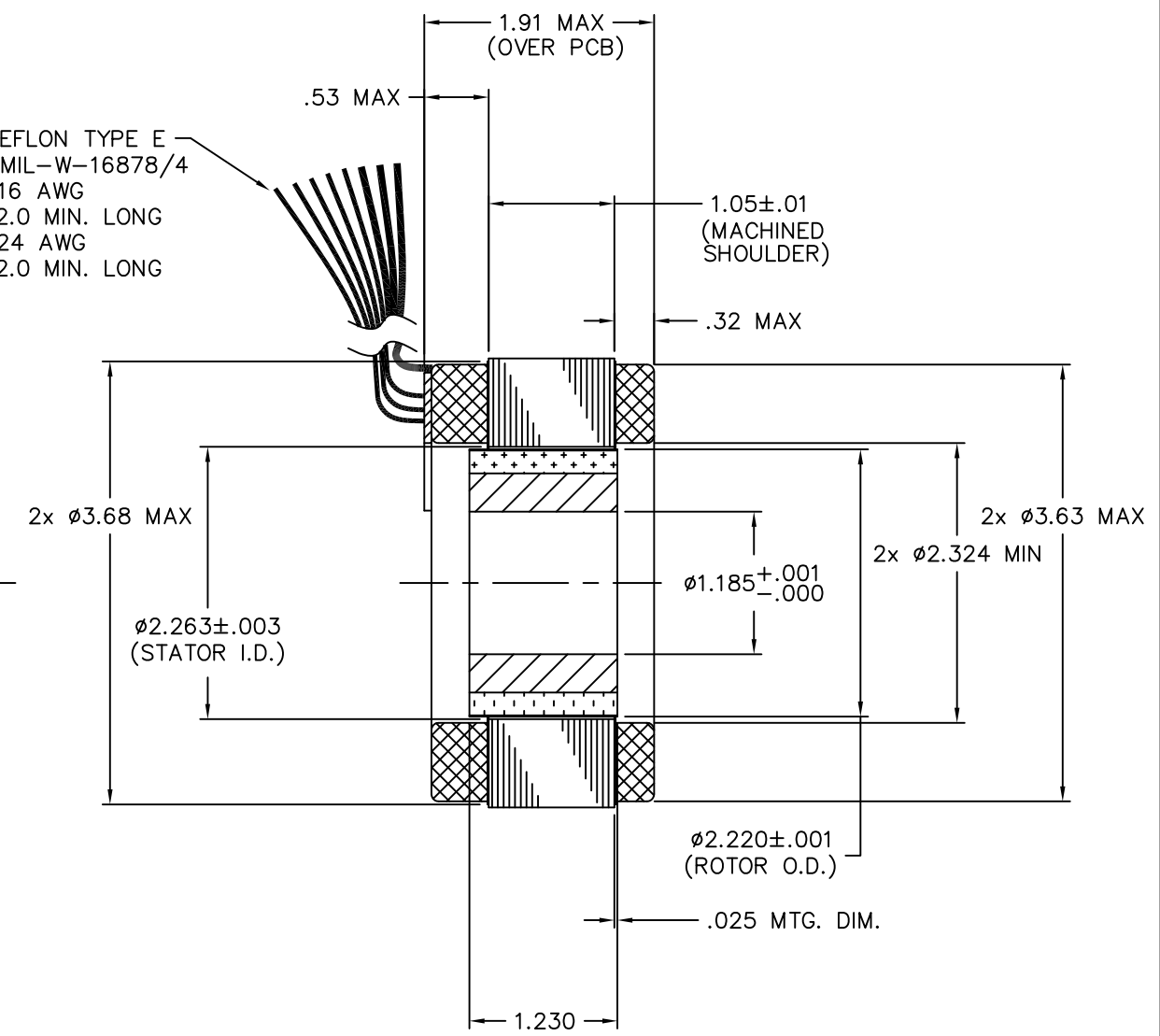


	COLOR	1	2	3	4	5	6
MOTOR LEADS	A	RED	+	+	-	-	
	B	BLK	-	+	+	-	
	C	GRN	-	-	+	+	
SENSOR LEADS	1	BRN	1	1	0	0	0
	2	BLU	0	1	1	1	0
	3	ORG	0	0	0	1	1
	Vcc+	YEL					
	GND	GRY					

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



LEAD WIRE: TEFLON TYPE E  
 PER MIL-W-16878/4  
 3x #16 AWG  
 12.0 MIN. LONG  
 5x #24 AWG  
 12.0 MIN. LONG



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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 -DIAMETERS SHALL NOT EXCEED A RUNDUT OF .005 FIM	
TOLERANCES: DECIMALS .X ± .03 .XX ± .01 .XXX ± .005	ANGULAR ±0° 30'
DO NOT SCALE DRAWING	

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

DRAWN J. THOMPSON	DATE 5/02/12	TITLE BRUSHLESS DC MOTOR PARTS SET
MECH CHECK	APPD	SIZE C
FILE NO. M:\TOP\DIP\DIP38-18-001A	FSCM NO. 55789	DWG NO. DIP38-18-001A
SCALE: NONE	REV P1	SHEET 1 OF 1



DIP38-18-001A P1 B