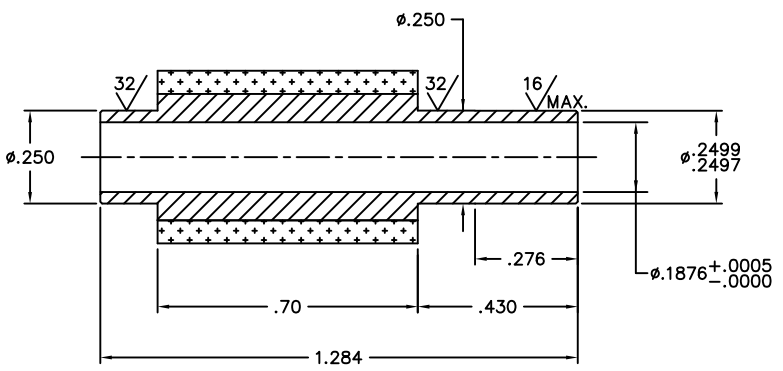


WINDING CONSTANTS *	UNITS	TOL	SYM	WDG A
DC RESISTANCE	OHMS	±12.5%	R	2.75
VOLTAGE @ T _p	VOLTS	NOMINAL	V _p	13.5
CURRENT @ T _p	AMPERES	NOMINAL	I _p	4.91
TORQUE SENSITIVITY	OZ-IN/AMP	±10%	K _T	3.26
BACK EMF CONSTANT	VOLTS/(RAD/SEC)	±10%	K _B	0.023
INDUCTANCE @ 1KHz	MILLIHENRY	±30%	L	0.71

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.

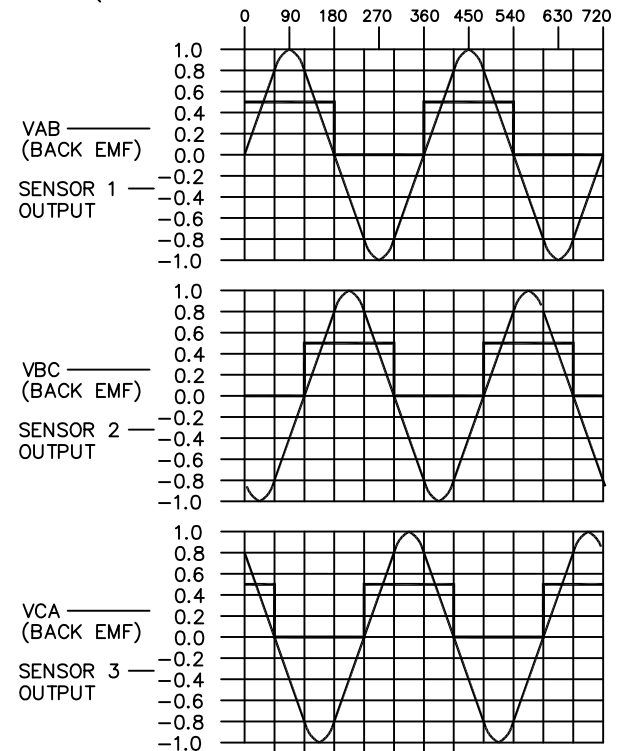
LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
X1	110xxx	INITIAL RELEASE	JWT		

MOTOR PARAMETERS *	UNITS	SYM	VALUE
PEAK TORQUE	OZ-IN	T _p	16
CONTINUOUS STALL TORQUE **	OZ-IN	T _{cs}	4.58
MOTOR CONSTANT	OZ-IN/√WATT	K _M	1.97
ELECTRICAL TIME CONSTANT	MILLISECOND	t _E	0.26
MECHANICAL TIME CONSTANT	MILLISECOND	t _M	1.48
POWER I²R @ T _p	WATTS	P _p	66.3
DAMPING FACTOR (ZERO IMPEDANCE)	OZ-IN/(RAD/SEC)	F _o	0.027
FRICTION TORQUE	OZ-IN	T _F	0.30
ROTOR INERTIA	OZ-IN-SEC²	J _M	4.0x10 ⁻⁵
THEO NO-LOAD SPEED @ 12 VDC	RPM	S _o	4983
THEO ACC @ T _p	RAD/SEC²	α _T	4.0x10 ⁵
THERMAL RESISTANCE	°C/WATT	θ _{TH}	16.0
MAX ALLOWABLE WINDING TEMP	°C	TEMP	155
NUMBER OF PHASES/WINDING TYPE			3/Δ
NUMBER POLES			6
WEIGHT	OZ	W _T	1.8

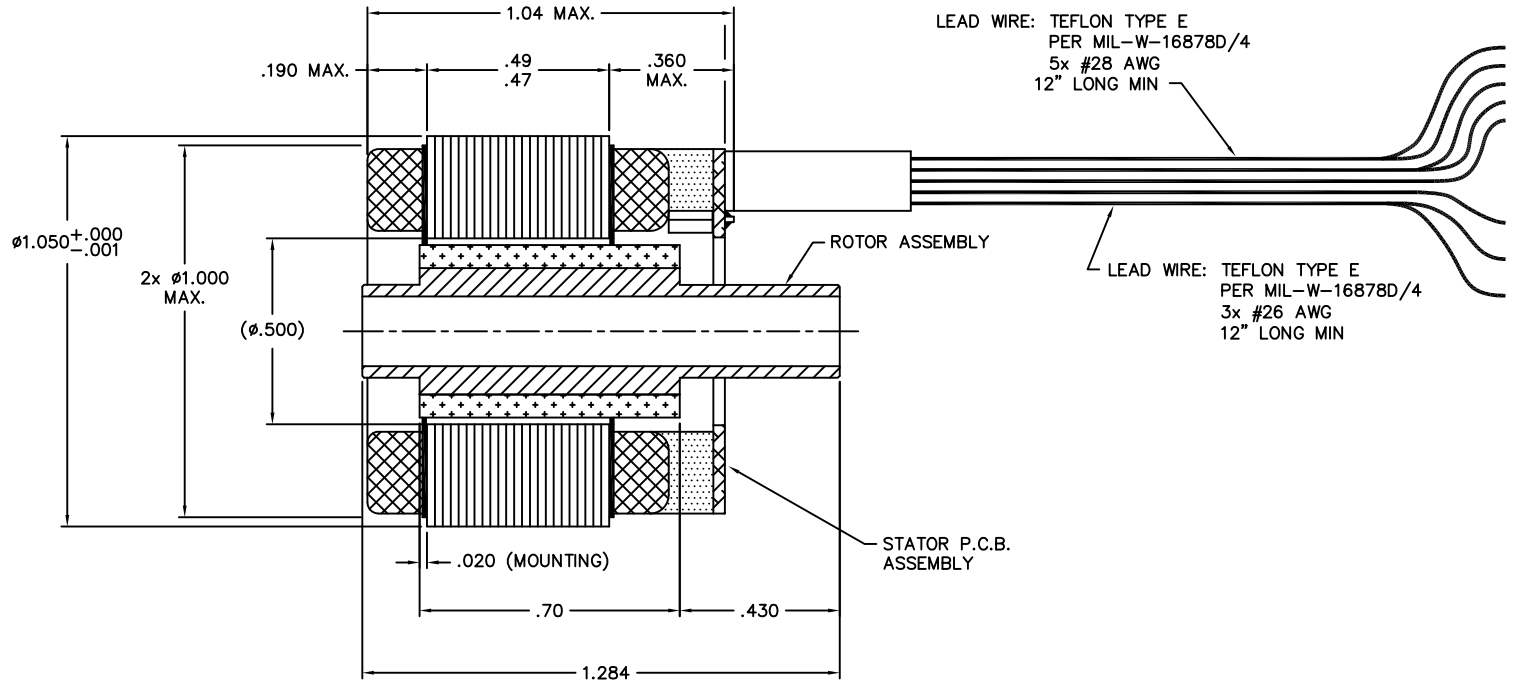


ROTOR ASSEMBLY DIMENSIONS

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



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



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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 ROUNDTOP OF .005 FIM

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 9/02/11	TITLE BLDC MOTOR PART SET
MECH CHECK		
APPD		
FILE NO. M:\TOP LEVEL\DIP\...	SIZE D	FSCM NO. 55789
	DWG NO. DIP11-11-001A	REV X1
	SCALE: NONE	SHEET 1 OF 1

DIP11-11-001A X1