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DIP38-22-001A

X1

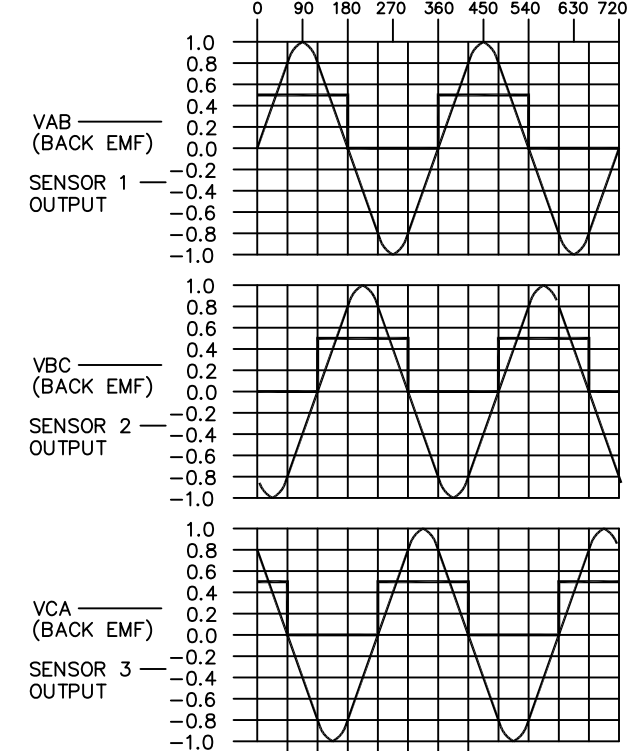
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WINDING CONSTANTS *	UNITS	TOL	SYM	WDG A
DC RESISTANCE	OHMS	±12.5%	R	4.5
VOLTAGE @ T _p	VOLTS	NOMINAL	V _p	50.4
CURRENT @ T _p	AMPERES	NOMINAL	I _p	11.2
TORQUE SENSITIVITY	OZ-IN/AMP	±10%	K _T	116
BACK EMF CONSTANT	VOLTS/(RAD/SEC)	±10%	K _B	.823
INDUCTANCE	MILLIHENRY	±30%	L	12.99

MOTOR PARAMETERS *	UNITS	SYM	NOM. VALUE
PEAK TORQUE	OZ-IN	T _p	1300
CONTINUOUS STALL TORQUE **	OZ-IN	T _{CS}	-
MOTOR CONSTANT	OZ-IN/√WATT	K _M	54.6
ELECTRICAL TIME CONSTANT	MILLISECOND	τ _E	-
MECHANICAL TIME CONSTANT	MILLISECOND	τ _M	1.4
POWER I ² R @ T _p	WATTS	P _p	565
DAMPING FACTOR (ZERO IMPEDANCE)	OZ-IN/(RAD/SEC)	F ₀	21.2
BREAKAWAY TORQUE	OZ-IN	T _F	-
ROTOR INERTIA	OZ-IN SEC ²	J _M	0.031
MAX ALLOWABLE SPEED	RPM	S _M	-
SPEED @ 300 OZ-IN & 48 VDC	RPM	S _L	330
THEO ACC @ T _p	RAD/SEC ²	α _T	42
THERMAL RESISTANCE ***	°C/WATT	θ _{TH}	2.0
MAX ALLOWABLE WINDING TEMP	°C	TEMP	155
NUMBER OF PHASES/WINDING TYPE			3/Y
NUMBER OF POLES			12
WEIGHT	OZ	W _T	74

* 25°C AMBIENT TEMP
 ** 25°C AMBIENT, 125° WINDING TEMP
 *** WITH 12 X 12 X .25 THICK AL HEAT SINK

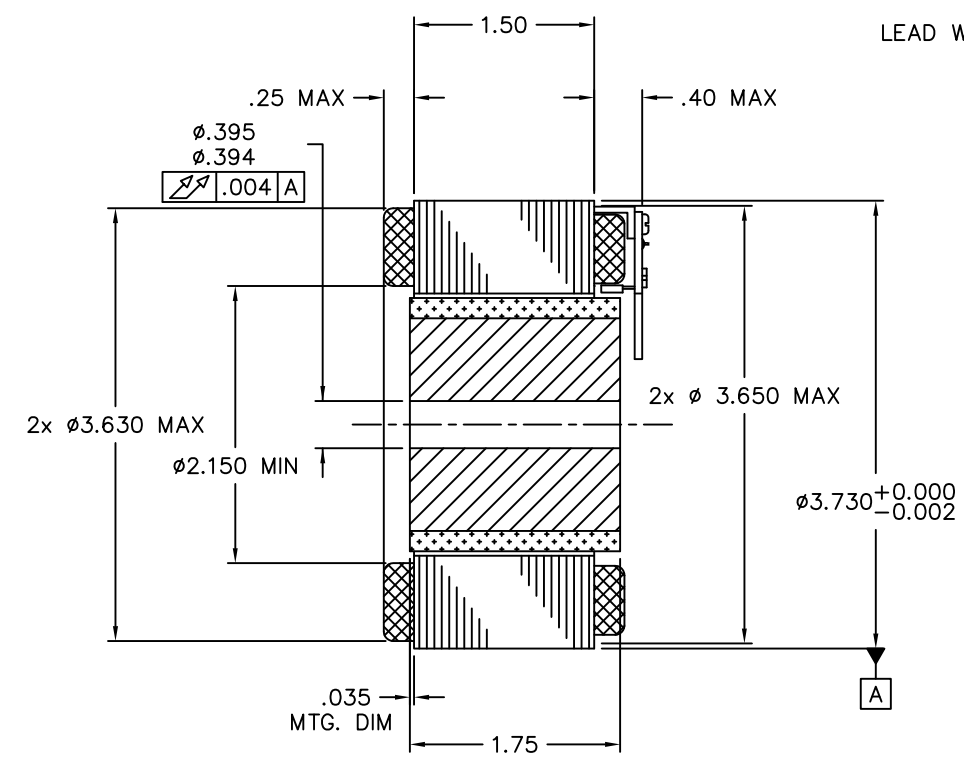
BACK EMF AND SENSOR WAVEFORMS
 (ROTATION OF MOTOR = COUNTER CLOCKWISE FACING LEAD SIDE)



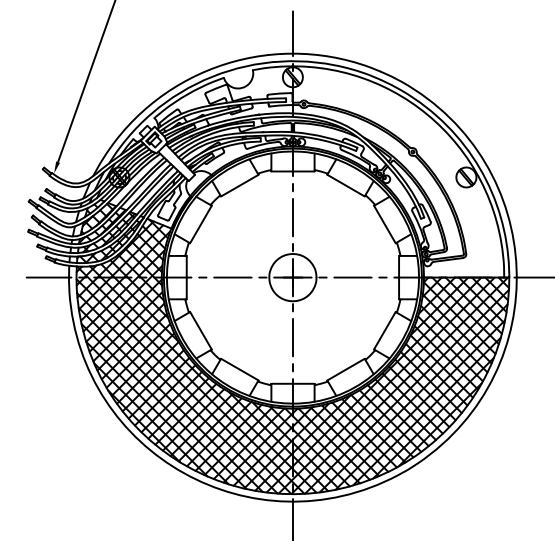
MOTOR LEADS	COLOR	1	2	3	4	5	6
A	RED	+	+	-	-		
B	BLK	-	+	+	-		
C	GRN	-	-	+	+		
1	BRN	1	1	0	0	0	1
2	BLU	0	1	1	1	0	0
3	ORG	0	0	0	1	1	1
Vcc+	YEL						
GND	GRY						

- 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		



LEAD WIRE: TEFLON TYPE E
 3x 20 AWG
 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

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 11/22/11	TITLE BLDC MOTOR PART SET		
MECH CHECK		SIZE B	FSCM NO. 55789	DWG NO. DIP38-22-001A
APPD		REV X1		
FILE NO. M:\TOPLEVEL\DIP\...	SCALE 1/1	SHEET 1 OF 1		