

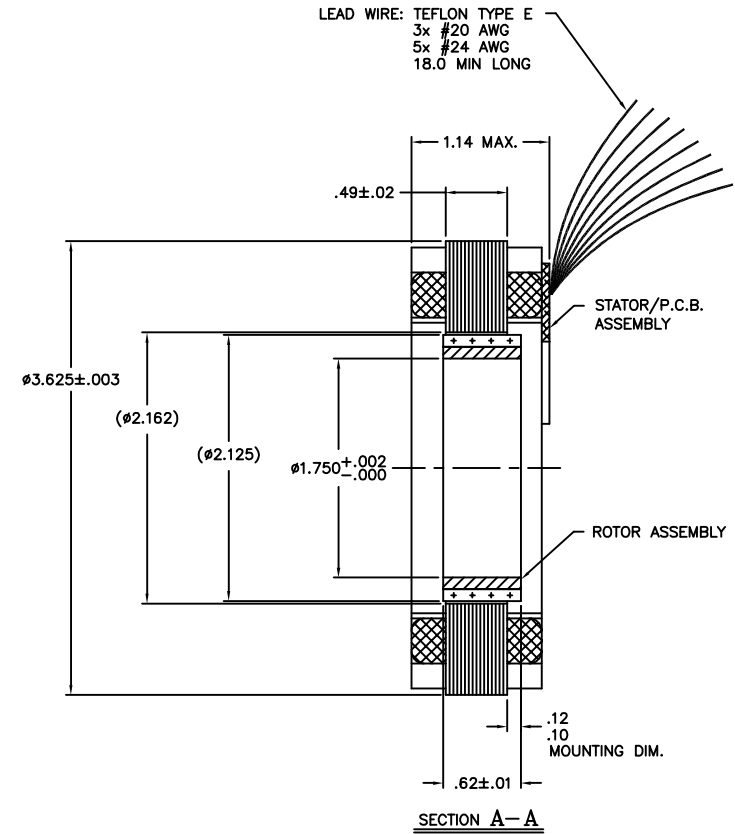
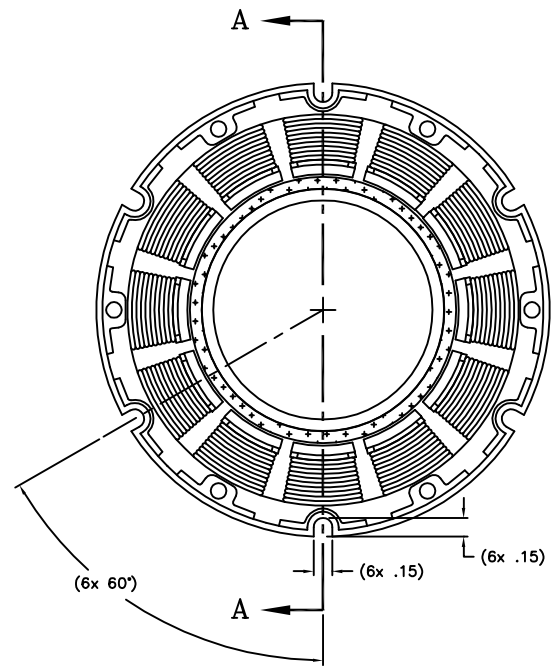
WINDING CONSTANTS	UNITS	TOL	SYM	WDG Z
DC RESISTANCE	OHMS	±12.5%	R	1.0
VOLTAGE @ T _p	VOLTS	NOMINAL	V _p	18
CURRENT @ T _p	AMPERES	NOMINAL	I _p	18
TORQUE SENSITIVITY	OZ IN/AMP	±10%	K _T	8.92
BACK EMF CONSTANT	VOLTS/(RAD/SEC)	±10%	K _B	0.063
INDUCTANCE	MILLIHENRY	±30%	L	1.51

NOTES: UNLESS OTHERWISE SPECIFIED
 1. INTERPRET DIMENSIONING & TOLERANCING IAW ASME Y14.5M-1994.
 2. INTERPRET DRAWING IAW MIL-STD-100.
 3. INTERPRET ABBREVIATIONS IAW MIL-STD-12.

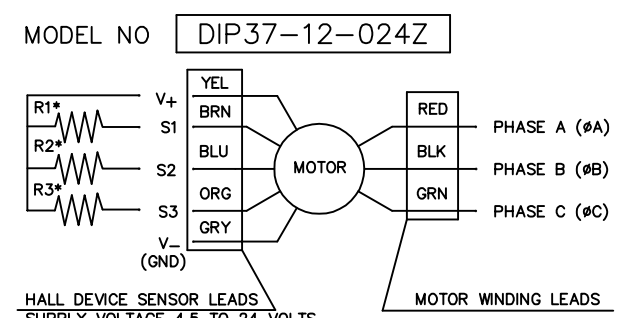
LTR	ECN NO.	DESCRIPTION	DRN	APP'D	DATE
B	020376	UPDATE PARAMETERS	MJL	SH	05/08/02
C	060470	ADD RoHS LOGO	SLM	SH	06/20/06

MOTOR PARAMETERS	UNITS	SYM	VALUE
PEAK TORQUE *	OZ IN	T _p	160.0
CONTINUOUS STALL TORQUE **	OZ IN	T _{cs}	50.0
MOTOR CONSTANT	OZ IN/√WATT	K _M	8.92
ELECTRICAL TIME CONSTANT	MILLISECOND	τ _F	1.51
MECHANICAL TIME CONSTANT	MILLISECOND	τ _M	19.8
POWER I ² R @ T _p	WATTS	P _p	324
DAMPING FACTOR (ZERO IMPEDANCE)	OZ IN/(RAD/SEC)	F ₀	0.66
FRICTION TORQUE	OZ IN	T _F	3.0
ROTOR INERTIA	OZ IN SEC ²	J _M	0.013
MAX ALLOWABLE SPEED	RPM	S _M	8,000
SPEED @ 40 OZ IN & 28 VDC	RPM	S _L	1,800
THEO ACC @ T _p	RAD/SEC ²	α _T	1.23x10 ⁴
THERMAL RESISTANCE ***	°C/WATT	θ _{TH}	2.6
MAX ALLOWABLE WINDING TEMP	°C	TEMP	125
PHASES/WINDING TYPE			3/Y
POLES			8
WEIGHT	OZ	W _T	40.0

* 10 SEC @ 25°C AMBIENT TEMP
 ** 25°C AMBIENT, 125° WINDING TEMP
 *** WITH 10 X 10 X .375 THICK AL HEAT SINK



CONNECTION DIAGRAM FOR BLDC MOTOR



HALL DEVICE SENSOR LEADS
 SUPPLY VOLTAGE 4.5 TO 24 VOLTS
 MAX SINK CURRENT 50 MA
 * PULL UP RESISTORS REQUIRED FOR OPEN COLLECTOR SENSOR OUTPUT
 RECOMMENDED R = 100 X V+ (Ω)
 SENSOR SEQUENCE IS 120° (ELECTRICAL)

MOTOR ROTATION CW (AS VIEWED FROM MOUNTING END)
 MOTOR ROTATION CCW (AS VIEWED FROM MOUNTING END)

(ELECTRICAL DEGREES)	S1	S2	S3	ΦA	ΦB	ΦC
0°	I	O	O	LO	HI	X
60°	I	O	I	X	HI	LO
120°	O	O	I	HI	X	LO
180°	O	I	I	LO	HI	X
240°	O	I	O	X	LO	HI
300°	I	I	O	LO	X	HI
360°	I	O	O	LO	HI	X

DEFINITIONS:
 HI = TURN ON SOURCE SIDE
 LO = TURN ON SINK SIDE
 X = BOTH OFF
 I = HI VOLTAGE
 O = LO VOLTAGE

THIRD ANGLE PROJECTION

BEI/KIMCO Magnetics Division PROPRIETARY DOCUMENT

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UNLESS OTHERWISE SPECIFIED:
 -ALL DIMENSIONS ARE IN INCHES
 -BREAK SHARP EDGES .015 MAX.
 -SURFACE ROUGHNESS √25
 -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
 SAN MARCOS, CA 92069

DRAWN: R. ELLIOTT DATE: 11/19/01 TITLE: BRUSHLESS DC MOTOR (PART SET)

MECH CHECK: S. MCGHEE DATE: 11/19/01

APPD: S. HSIA DATE: 11/19/01

FILE NO: M/DIP37-12-024Z

SIZE: C FSCM NO.: 55789 DWG NO.: DIP37-12-024Z REV: C

SCALE: 1/1 SHEET: 1 OF 1



DIP37-12-024Z