

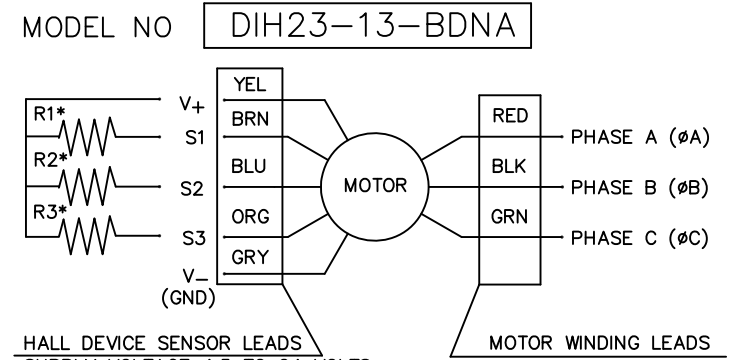
LTR	ECO NO.	DESCRIPTION	DRN	APP'D	DATE
A	98-1076	BDNA S/B BDNA	RLE	HP	09/08/98
B	130190	CONVERT TO RoHS	JWT	BD	6/17/13

WINDING CONSTANTS	UNITS	TOL	SYM	WDG A
DC RESISTANCE	OHMS	±12.5%	R	1.1
VOLTAGE @ PEAK TORQUE 24 OZ-IN	VOLTS	NOMINAL	Vp	10.2
CURRENT @ PEAK TORQUE 24 OZ-IN	AMPERES	NOMINAL	Ip	9.23
TORQUE SENSITIVITY	OZ-IN/AMP	±10%	Kt	2.60
BACK EMF CONSTANT	VOLTS/(RAD/SEC)	±10%	Kb	0.018
INDUCTANCE	MILLIHENRY	±30%	L	0.71

MOTOR PARAMETERS	UNITS	SYM	VALUE
PEAK TORQUE *	OZ-IN	Tp	24.0
CONTINUOUS STALL TORQUE **	OZ-IN	Tcs	7.8
MOTOR CONSTANT	OZ-IN/√WATT	Km	2.5
ELECTRICAL TIME CONSTANT	MILLISECOND	Te	0.65
MECHANICAL TIME CONSTANT	MILLISECOND	Tm	10.6
POWER I²R @ TORQUE 24 OZ-IN	WATTS	P	93.7
DAMPING FACTOR (ZERO IMPEDANCE)	OZ-IN/(RAD/SEC)	Fo	0.043
FRICITION TORQUE	OZ-IN	Tf	0.7
ROTOR INERTIA	OZ-IN SEC²	Jm	4.6x10⁻⁴
MAX ALLOWABLE SPEED	RPM	Sm	20,000
SPEED @ OZ-IN & VDC	RPM	SI	
THEO ACC @ 24 OZ-IN	RAD/SEC²	αCT	5.2x10⁴
THERMAL RESISTANCE ***	°C/WATT	θ th	7.0
MAX ALLOWABLE WINDING TEMP	°C	TEMP	125
PHASES/WINDING TYPE			3/Y
POLES			8
WEIGHT	OZ	Wt	8.1

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

CONNECTION DIAGRAM FOR BLDC MOTOR

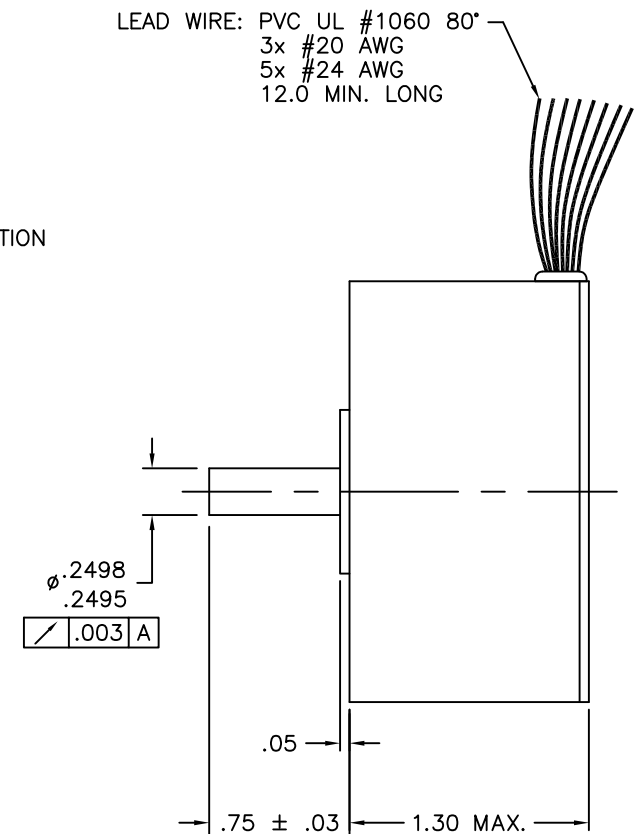
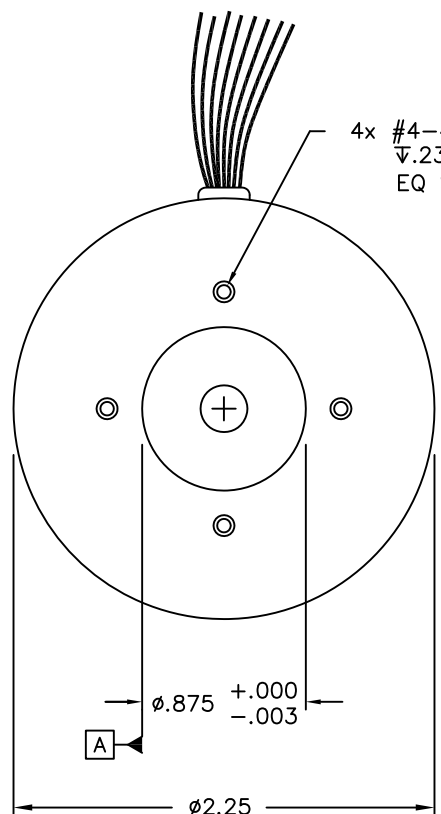


SUPPLY VOLTAGE 4.5 TO 24 VOLTS
 MAX SINK CURRENT 50 MA
 * PULL UP RESISTORS REQUIRED FOR OPEN COLLECTOR SENSOR OUTPUT
 RECOMMENDED R = 100 X V+ (Ω)
 SENSOR SEQUENCE IS 120° (ELECTRICAL)

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	HI	LO	X
240°	O	I	O	X	LO	HI
300°	I	I	O	LO	X	HI
360°	I	I	O	LO	X	HI

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



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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 RUNDOUT 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 R. ELLIOTT	DATE 03/05/98	TITLE BLDC MOTOR		
MECH CHECK J. THOMPSON	DATE 6/07/13	SIZE B	FSCM NO. 55789	DWG NO. DIH23-13-BDNA
APPD HA PHAM	DATE 03/05/98	REV B	SHEET 1 OF 1	
FILE NO. M:\TOPLEVEL\DIH23-13-BDNA	SCALE: NONE			