

**SPECIFICATIONS:**

NUMBER OF PHASES: 4	ROTOR INERTIA: 135 g-cm <sup>2</sup> ( 0.74 oz-in <sup>2</sup> ) NOM
STEPS PER REVOLUTION: 200	DETENT TORQUE: 22 mNm ( 3.11 oz-in) MIN
STEP ANGLE: 1.8°	INSULATION CLASS: B
STEP TO STEP ACCURACY: ±0.09° [1], [2]	BEARINGS: ABEC 3, DOUBLE SHIELDED
POSITIONAL ACCURACY: ±0.09° [1], [3]	TEMP. RISE: 80 °C MAX. [9]
HYSTERESIS: N/A%	OPERATING TEMP. RANGE: -20 TO +50 °C
SHAFT RUNOUT: 0.05 mm T.I.R. MAX	STORAGE TEMP. RANGE: -30 TO +70 °C
RADIAL PLAY: 0.02 mm MAX (.5KG RADIAL LOAD)	RELATIVE HUMIDITY RANGE: 15 TO 85 %
END PLAY: 0.08 mm MAX (.5KG AXIAL LOAD)	WEIGHT: 0.88 kg ( 1.95 lb)

SPECIFICATION	[7] RESISTANCE PER PHASE (ohm ±10%)	[8] INDUCTANCE PER PHASE (mH ±20%)	[1] RATED CURRENT (amp)	[1] HOLDING TORQUE (Nm MIN)	[1] HOLDING TORQUE (oz-in Min)
UNI-POLAR	1.4	1.4	2.0	0.39	55.2
BI-POLAR SERIES	2.8	5.6	1.41	0.54	76.5
BI-POLAR PARALLEL	0.7	1.4	2.83	0.54	76.5

NOTES, UNLESS OTHERWISE SPECIFIED:

- [1] MEASUREMENTS MADE AT RATED CURRENT IN EACH PHASE.
- [2] BETWEEN ANY TWO ADJACENT FULL STEP POSITIONS.
- [3] MAXIMUM ERROR IN 360°.
- 4. HIPOT 500 VAC, 60 Hz FOR ONE MINUTE.
- 5. LEADS: 8, AWG 20, 7 STRAND MIN., UL AND CSA APPROVED, UL 1430 OR UL 3265.
- 6. INSULATION RESISTANCE: 100 MEGOHMS MIN AT 500 VDC.
- [7] MEASUREMENTS MADE AT LEAD ENDS.
- [8] AS MEASURED ACROSS EACH PHASE USING AN A.C. INDUCTANCE BRIDGE AT 1 KHz.
- [9] AS MEASURED BY THE CHANGE IN RESISTANCE METHOD, WITH RATED VOLTAGE APPLIED TO 2 PHASES; WITH MOTOR AT REST.
- [10] BRAKE ATTACHED TO REAR END OF MOTOR.
- 11. ROTOR & STATOR LAMINATED CONSTRUCTION.
- 12. THIS MOTOR TO BE MANUFACTURED IN COMPLIANCE WITH THE CURRENT EU RoHS DIRECTIVE.
- [13] MOTOR LABEL TO INCLUDE "ROHS" COMPLIANT, AMP P/N, "MADE IN (COUNTRY OF ORIGIN)", AND DATE CODE.
- 14. HI TORQUE MOTOR DESIGN.

**BRAKE SPECIFICATIONS**

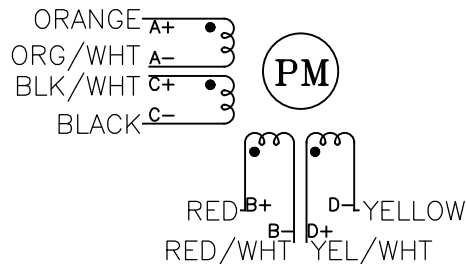
VOLTAGE	CURRENT	POWER	TORQUE	MAX. SPEED	ENGAGE DELAY	DISENGAGE DELAY	INSULATION CLASS
24DC	167 mA	4W	1.5 Nm	1000 RPM	50 ms	50 ms	B

**FULL STEP SWITCHING SEQUENCE**

BI-POLAR SERIES, FACING MOUNTING END

2 PHASE ON WITH A- WIRE CONNECTED TO C+ WIRE AND B- WIRE CONNECTED TO D+ WIRE .

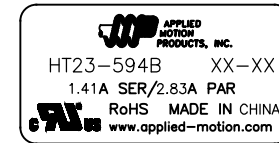
STEP	A+	C-	B+	D-
0	+	-	+	-
1	-	+	+	-
2	-	+	-	+
3	+	-	-	+
4	+	-	+	-



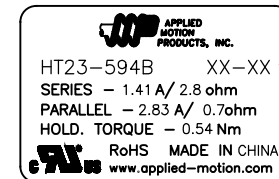
HT23-594B

**REVISIONS**

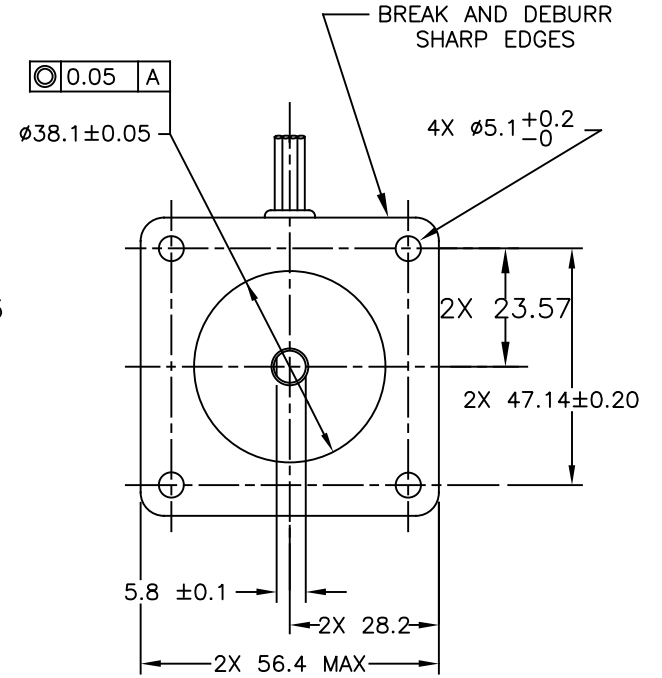
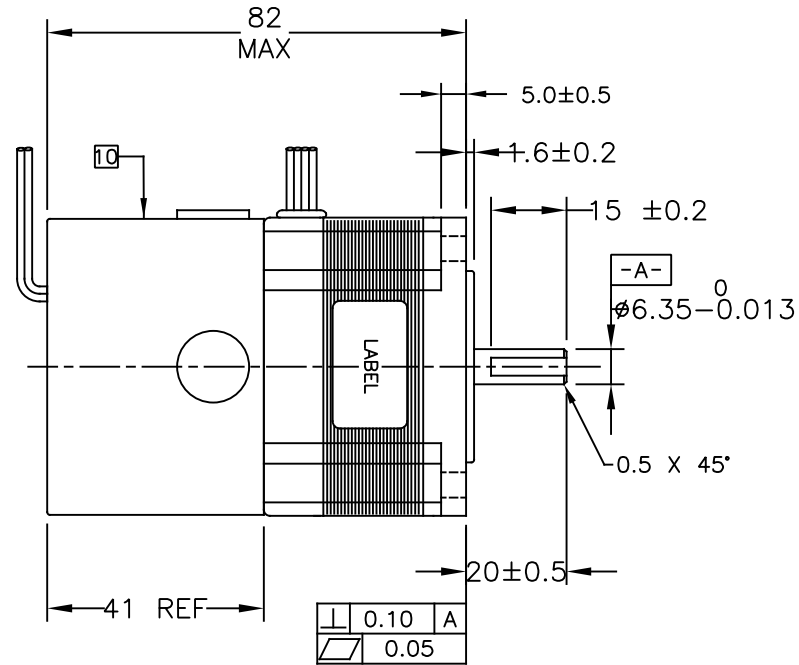
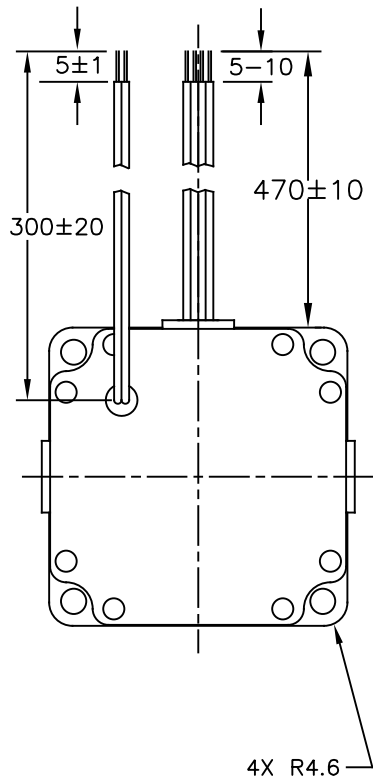
ECO NO.	REV	DESCRIPTION	DATE	APPROVED
7462	A	PRELIMINARY RELEASE	8/9/16	J.KORDIK
7852	B	REVISE MOTOR WEIGHT	2/16/18	J.KORDIK
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-



**LABEL DETAIL**  
BOTH OPTIONS ACCEPTABLE



CONTRACT NO. -					
APPROVALS					DATE
DRAWN K.KESLER	8/1/16	<h1>STEP MOTOR OUTLINE</h1>			
CHECKED -	-				
APPROVED -	-	B	COMPUTER DATA BASE DRAWING	DWG NO. HT23-594B	REV B
APPROVED -	-	SCALE: NONE		SHEET 1 OF 2	



TOLERANCES		THIRD ANGLE PROJECTION		APPLIED MOTION PRODUCTS, INC.	
*ALL DIMENSIONS IN MM					
DECIMALS: MM X.XX = ±0.13 X.X = ±0.25 ANGLES: MACH. = ±0.5° CHAM. = ±5°					
COMPUTER DATA BASE DRAWING		APPROVALS	DATE	STEP MOTOR OUTLINE	REV B
		DRAWN K. KESLER	8/1/16		
		CHECKED	-	B	DWG NO. HT23-594B
		APPROVED	-	SCALE: NONE	SHEET 2 OF 2