

SPECIFICATIONS:

NUMBER OF PHASES: 4	ROTOR INERTIA: 260 g-cm^2 (1.422 oz-in ²) NOM
STEPS PER REVOLUTION: 200	DETENT TORQUE: 407.9 g-cm (5.66 oz-in) MIN
STEP ANGLE: 1.8°	INSULATION CLASS: B
STEP TO STEP ACCURACY: 0.09°	BEARINGS: ABEC 3, DOUBLE SHIELDED
POSITION ACCURACY: 0.09°	TEMP. RISE: 80°C MAX. 9
HYSTERESIS: N/A%	OPERATING TEMP. RANGE: -20 TO +50°C
SHAFT RUNOUT: 0.03 mm T.I.R. MAX	STORAGE TEMP. RANGE: -30 TO +70°C
RADIAL PLAY: 0.02 mm MAX (0.5 kg RADIAL LOAD)	RELATIVE HUMIDITY RANGE 15 TO 85%
END PLAY: 0.08 mm MAX (0.5 kg AXIAL LOAD)	WEIGHT: 600 G (21.16 oz) APPROXIMATE

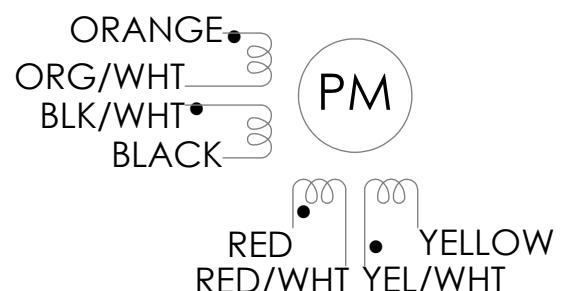
CONNECTION	RESISTANCE PER PHASE (ohm ±10%) 7	INDUCTANCE PER PHASE (mH ±20%) 8	RATED CURRENT (Amp)	HOLDING TORQUE (Nm MIN) 1	HOLDING TORQUE (oz-in) 1
BI-POLAR SERIES	1.7	5.7	2.12	1.12	158.6
BI-POLAR PARALLEL	0.4	1.4	4.24	1.12	158.6
UNI-POLAR	0.9	1.4	3.00	0.85	120.4

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, 60Hz FOR ONE MINUTE.
5. LEADS: 8, 22 AWG, 7 STRAND MIN. UL AND CSA APPROVED. UL 1430 OR UL 3265
6. INSULATION RESISTANCE: 100 MEGOHMS MIN AT 500 VDC.
7. AS MEASURED ACROSS EACH PHASE.
8. AS MEASURED ACROSS EACH PHASE USING AN A.C. INDUCTANCE BRIDGE AT 1KHz.
9. AS MEASURED BY THE CHANGE IN RESISTANCE METHOD, WITH RATED CURRENT APPLIED TO 2 PHASES: WITH MOTOR AT REST.
10. ENCODER 970-1001 INSTALLED PER AMP ASSEMBLY PRACTICES. RESOLUTION: 2000 CPR WITH MARKER PULSE. ENCODER CABLE SOLD SEPARATELY.
11. ROTOR AND STATOR LAMINATED CONSTRUCTION.
12. THIS MOTOR IS MANUFACTURED IN COMPLIANCE WITH CURRENT EU RoHS DIRECTIVE.
13. MOTOR LABEL TO INCLUDE AMP LOGO, AMP WEBSITE ADDRESS, "RoHS" COMPLIANCE LOGO, AMP P/N, "MADE IN (COUNTRY)", AND DATE CODE.
14. OTHER TAPPED HOLES MAY BE PRESENT ON REAR OF MOTOR.

REVISIONS				
ECO #	REV.	DESCRIPTION	DATE	APPROVED
6941	A	INITIAL RELEASE	1/16/14	J. KORDIK
8034	B	CHG REAR SHAFT LENGTH/TYPO	8/25/18	J. KORDIK
8705	C	UPDATED FRONT END BELL THICKNESS, SHAFT LENGTH	8/23/21	L. LIU
8787	D	REVISED MODEL & UPDATED SHEET FORMAT	5/20/22	L. LIU

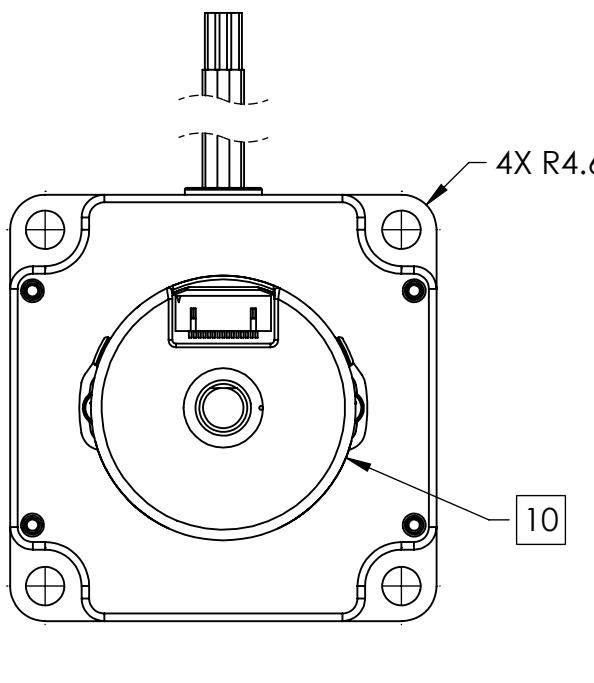
WIRING DIAGRAM

DRIVE SEQUENCE MODEL
BI-POLAR PARALLEL FULL STEP

STEP	(A+) ORG & BKL/WHT	(A-) BLK & ORG/WHT	(B+) RED & YEL/WHT	(B-) YEL & RED/WHT
1	+	-	+	-
2	-	+	+	-
3	-	+	-	+
4	+	-	-	+
1	+	-	+	-

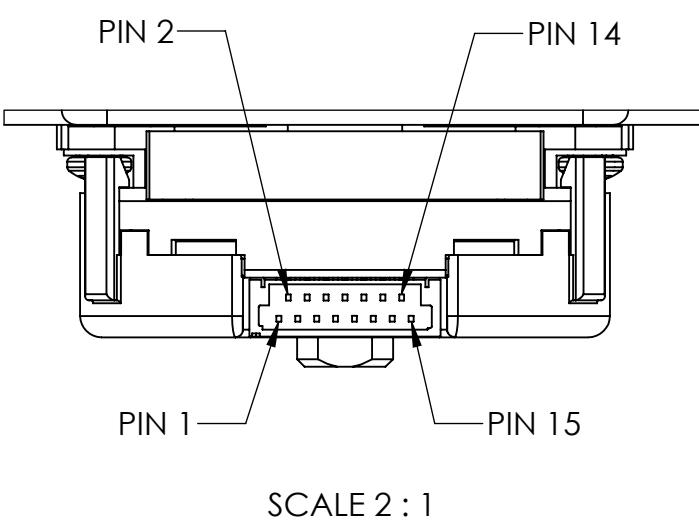
CW (CLOCKWISE) AND CCW (COUNTER-CLOCKWISE) ROTATION
WHEN SEEN FROM THE MOUNTING FACE END OF THE MOTOR

STEPPER MOTOR		
SIZE	DWG. NO.	REV
B	HT23-598D-ZAA	D
DO NOT SCALE DRAWING	ALT SAP:	SCALE: 1:1
		SHEET 1 OF 2

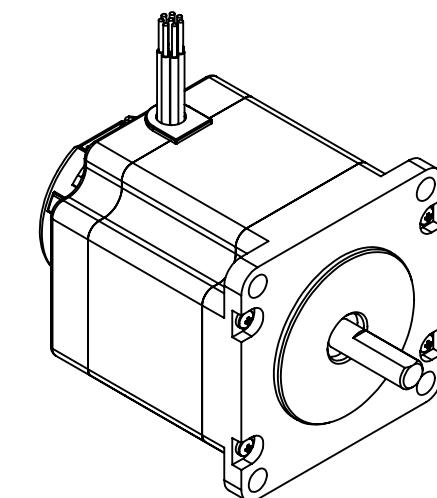
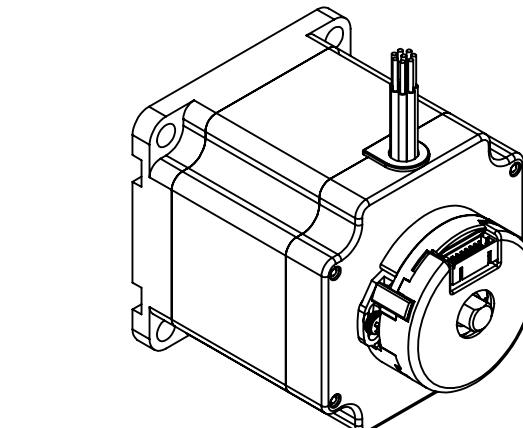
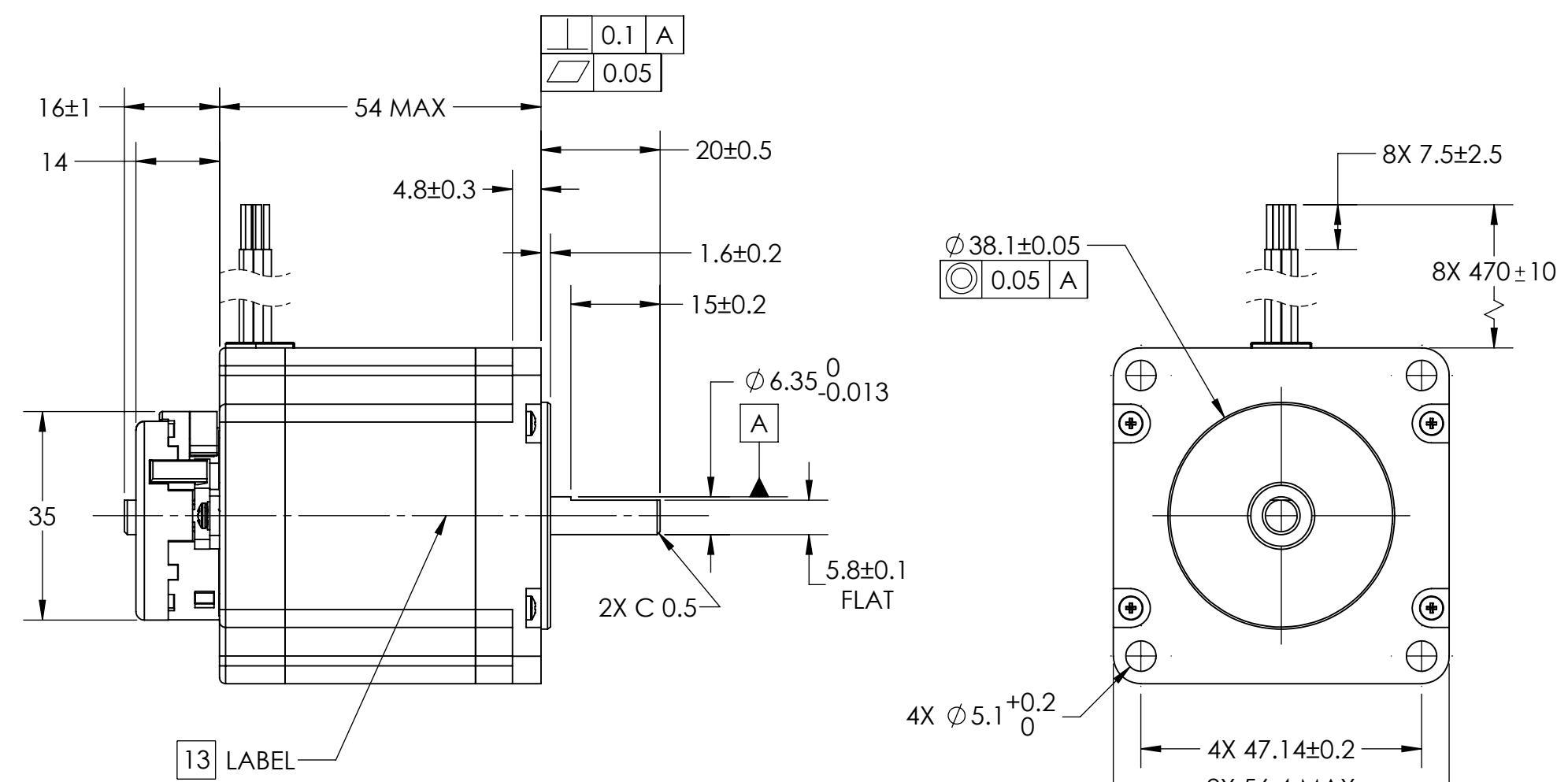


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ENCODER CONNECTIONS	
PIN NO:	SIGNAL
1	CH A+
2	CH A-
3	CH B+
4	CH B-
5	INDEX+
6	INDEX-
7	N/C
8	N/C
9	N/C
10	N/C
11	N/C
12	N/C
13	+VCC
14	GND
15	N/C



SCALE 2:1



PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS
DRAWING IS THE SOLE PROPERTY OF
APPLIED MOTION PRODUCTS. ANY
REPRODUCTION IN PART OR AS A WHOLE
WITHOUT THE WRITTEN PERMISSION OF
APPLIED MOTION PRODUCTS IS
PROHIBITED.

THIRD ANGLE PROJECTION		NAME	DATE	TITLE:
UNLESS OTHERWISE SPECIFIED:		DRAWN	Y. LAPNET	
DIMENSIONS ARE IN MILLIMETERS		PRE.CHECK		
TOLERANCES:		PRE.APPROVAL		
- ANGULAR: ± 0.5		FIN.CHECK		
- ONE DECIMAL PLACE: ± 0.25		C. BREUNINGER	5/20/22	
- TWO DECIMAL PLACES: ± 0.13		SAP:	4611110060866	
MATERIAL		FINISH	ALT DWG. NO.:	
		DO NOT SCALE DRAWING	ALT SAP:	
				SCALE: 1:2
				SHEET 2 OF 2