

SPECIFICATIONS:

NUMBER OF PHASES: 4	ROTOR INERTIA: 750 g-cm <sup>2</sup> (4.09 oz-in <sup>2</sup> ) NOM
STEPS PER REVOLUTION: 200	DETENT TORQUE: 120 mN-m (16.99 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.
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: 1500 G (3.3 LB ) APPROXIMATE

CONNECTION	RESISTANCE PER PHASE (ohm $\pm 10\%$ ) <span>7</span>	INDUCTANCE PER PHASE (mH $\pm 20\%$ ) <span>8</span>	RATED CURRENT (Amp)	HOLDING TORQUE (Nm MIN) <span>1</span>	HOLDING TORQUE (oz-in) <span>1</span>
BI-POLAR SERIES	2.0	8.8	2.5	2.5	354
BI-POLAR PARALLEL	0.5	2.2	5.0	2.5	354
UNI-POLAR	1.0	2.2	3.5	1.86	264

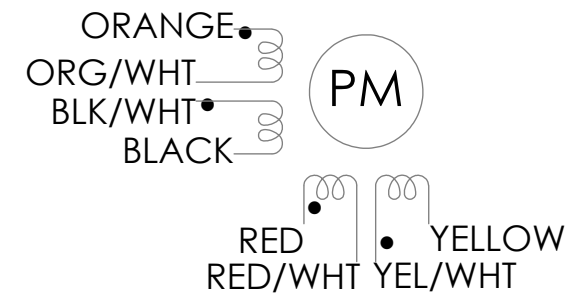
NOTES, UNLESS OTHER WISE SPECIFIED:

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 970-1028 INSTALLED PER AMP ASSEMBLY PRACTICES.  
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
7747	A	INITIAL RELEASE	12/20/17	J. KORDIK
8705	B	END BELL THICKNESS FROM 5+/- 0.5 TO 4.8+/-0.3	8/23/21	L. LIU
8787	C	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



<div></div> <div><b>Applied Motion Products</b> A MOONS' COMPANY</div> <div><b>PROPRIETARY AND CONFIDENTIAL</b></div> <div>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.</div>	THIRD ANGLE PROJECTION		NAME	DATE	TITLE:  STEPPER MOTOR		
	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS TOLERANCES: - ANGULAR: ± 0.5 - ONE DECIMAL PLACE: ± 0.25 - TWO DECIMAL PLACES: ± 0.13	DRAWN	Y. LAPNET	5/20/22			
		PRE.CHECK					
		PRE.APPROVAL					
		FIN.CHECK	C. BREUNINGER	5/20/22			
		MATERIAL	SAP: 4611110060912			SIZE	DWG. NO.
	FINISH	ALT DWG. NO.:			<b>B</b>	HT23-603D-BAA	C
	DO NOT SCALE DRAWING	ALT SAP:			SCALE: 1:1		SHEET 1 OF 2

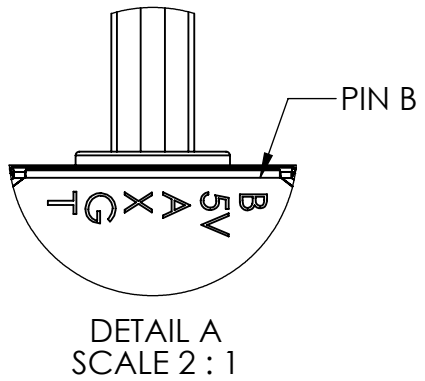
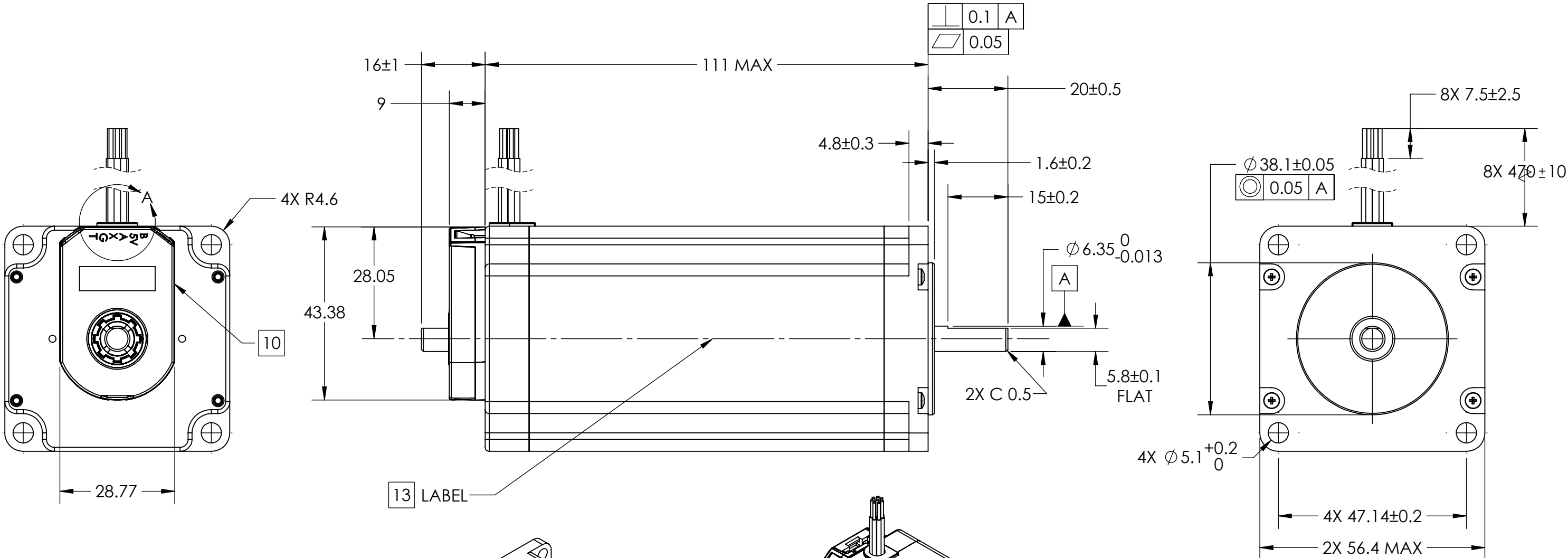
4 3 2 1

B


B

A

A



ENCODER CONNECTIONS	
PIN NO:	SIGNAL
B	CHANNEL B
5V	+5 V
A	CHANNEL A
X	INDEX CHANNEL
G	GROUND
T	UNUSED

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DO NOT SCALE DRAWING	ALT SAP:			SCALE: 1:2		SHEET 2 OF 2	

4 3 2 1

# Mouser Electronics

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