

SPECIFICATION

NUMBER OF PHASES: 4	ROTOR INERTIA: 38 g-cm^2 (0.21 oz-in 2) NOM
STEPS PER REVOLUTION: 200	DETENT TORQUE: 122 g-cm (1.70 oz-in) NOM
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 $+50^\circ\text{C}$
SHAFT RUNOUT: 0.03 mm T.I.R. MAX	STORAGE TEMP. RANGE: -30 TO $+70^\circ\text{C}$
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: 200 g (7.1 oz) APPROXIMATE

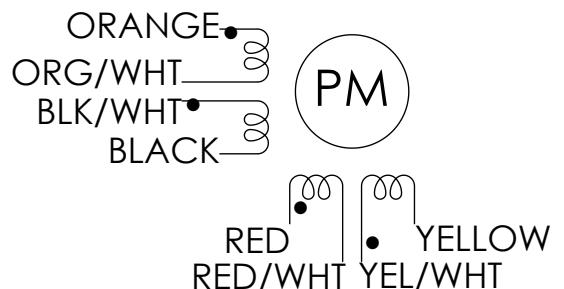
CONNECTION	RESISTANCE PER PHASE (ohm $\pm 10\%$) 7	INDUCTANCE PER PHASE (mH $\pm 20\%$) 8	RATED CURRENT (Amp)	HOLDING TORQUE (Nm MIN) 1	HOLDING TORQUE (oz-in MIN) 1
BI-POLAR SERIES	8.4	10	0.67	0.22	31.1
BI-POLAR PARALLEL	2.1	2.5	1.34	0.22	31.1
UNI-POLAR	4.2	2.5	0.95	0.16	22.6

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, 26 AWG, 7 STRAND MIN. UL AND CSA APPROVED. UL 1430
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. ROTOR AND STATOR LAMINATED CONSTRUCTION.
11. THIS MOTOR IS MANUFACTURED IN COMPLIANCE WITH CURRENT EU RoHS DIRECTIVE.
12. MOTOR LABEL TO INCLUDE AMP LOGO, AMP WEBSITE ADDRESS, "RoHS" COMPLIANCE LOGO, AMP P/N, "MADE IN (COUNTRY)", AND DATE CODE.

REVISIONS				
ECO #	REV.	DESCRIPTION	DATE	APPROVED
5976	A	INITIAL RELEASE	8/28/09	J. KORDIK
5995	B	PERPENDICULARITY CORRECTED	9/28/09	J. KORDIK
6090	C	STANDARDIZE ENCODER HOLES	3/29/10	J. KORDIK
7247	D	ADD UL TO LABEL	1/26/16	J. KORDIK
7446	E	REVISED NOTE 10	6/6/16	J. KORDIK
8209	F	CLEAN-UP	4/29/19	J. KORDIK
8277	G	REMOVE ENCODER HOLES	7/3/19	J. KORDIK
8675	H	RE-DRAW IN SOLIDWORKS, ENCODER HOLE DEPTH CHANGED	6/15/21	L. LIU
9023	J	SEPARATED SINGLE AND DOUBLE SHAFT DRAWINGS	01/18/24	K. KESLER

WIRING DIAGRAM



DRIVE SEQUENCE MODEL
BI-POLAR PARALLEL FULL STEP

STEP	ORG & BLK/WHT	BLK & ORG/WHT	RED & YEL/WHT	YEL & RED/WHT
1	+	-	+	-
2	-	+	+	-
3	-	+	-	+
4	+	-	-	+
1	+	-	+	-

CW (CLOCKWISE) AND CCW (COUNTER-CLOCKWISE) ROTATION
WHEN SEEN FROM THE FLANGE SIDE OF THE MOTOR

CCW
↑
CW

B

THIRD ANGLE PROJECTION		NAME	DATE	TITLE: STEPPER MOTOR
UNLESS OTHERWISE SPECIFIED:	DRAWN	C.BREUNINGER	01/16/24	
DIMENSIONS ARE IN MILLIMETERS	PRE.CHECK			
TOLERANCES:	PRE.APPROVAL			
- ANGULAR: $\pm 0.5^\circ$	FIN.CHECK	E.MERINO	01/17/24	
- ONE DECIMAL PLACE: ± 0.25	SAP: 4611110029085			
- TWO DECIMAL PLACES: ± 0.13	ALT DWG. NO.:			
MATERIAL	DO NOT SCALE DRAWING	ALT SAP:		
FINISH				

SIZE DWG. NO. REV
B HT17-268 J
SCALE: 1:1 SHEET 1 OF 2

A



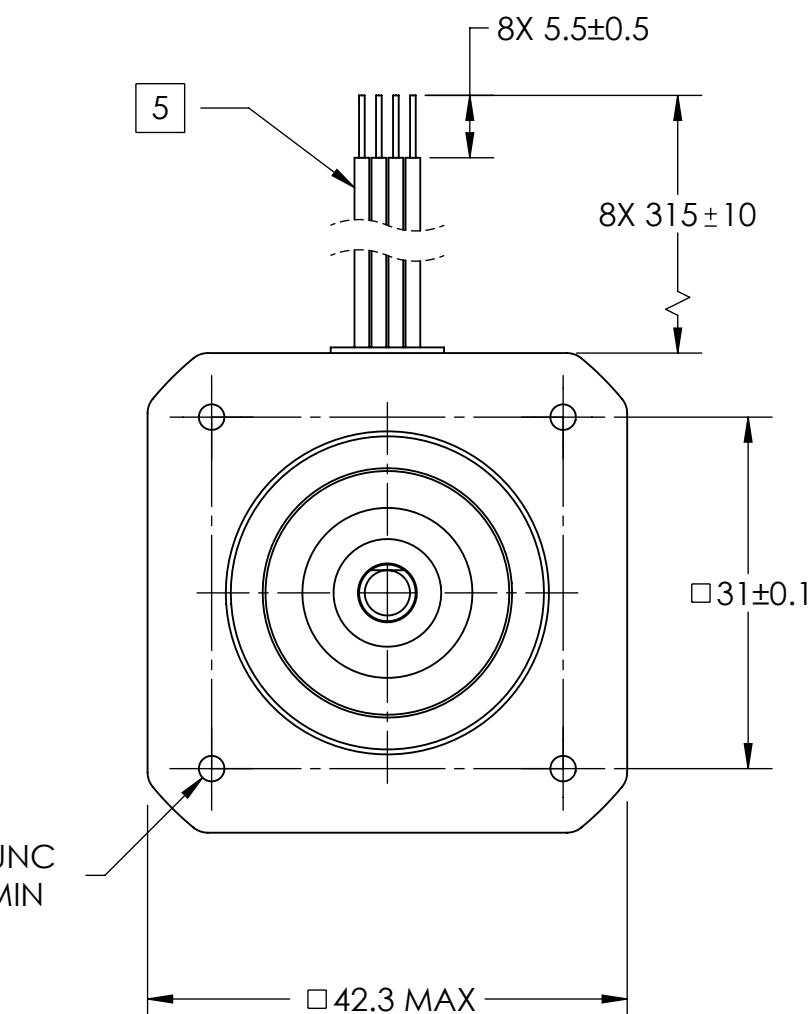
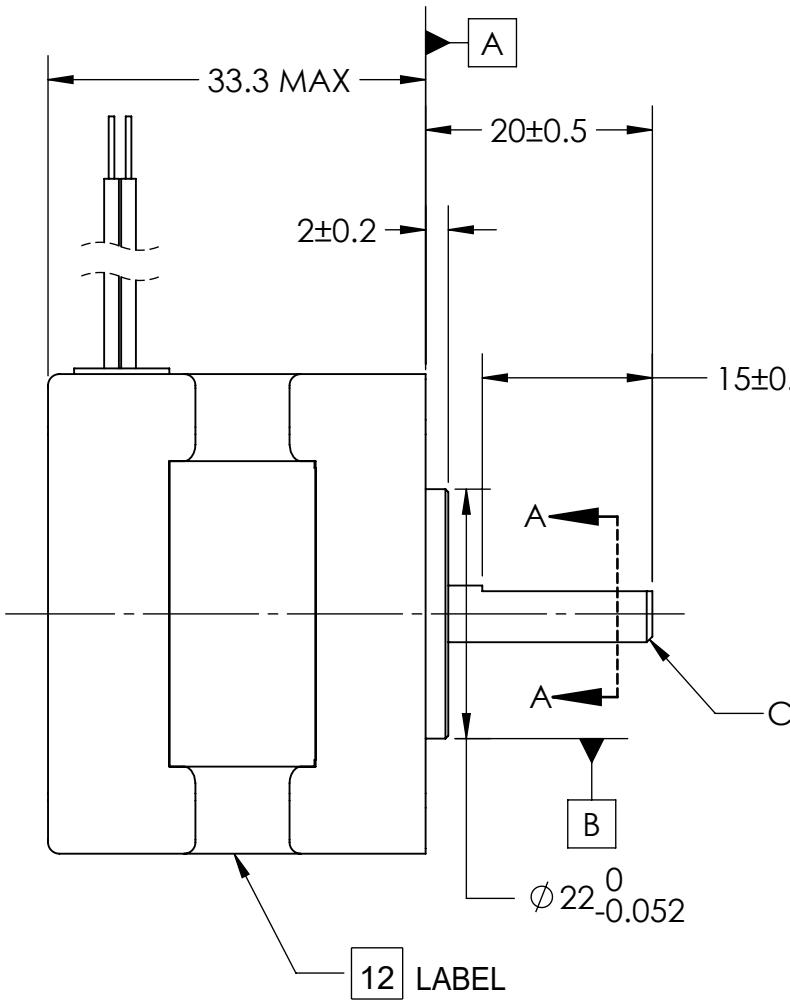
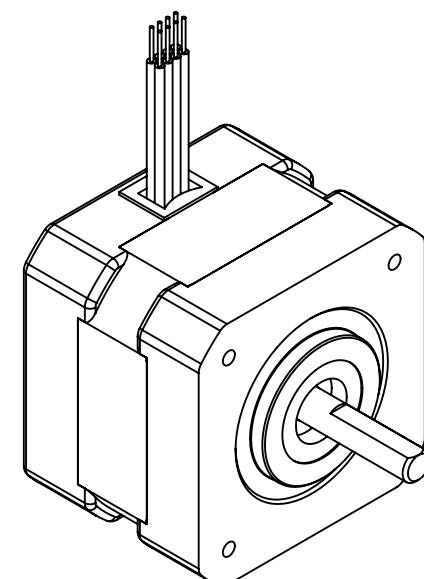
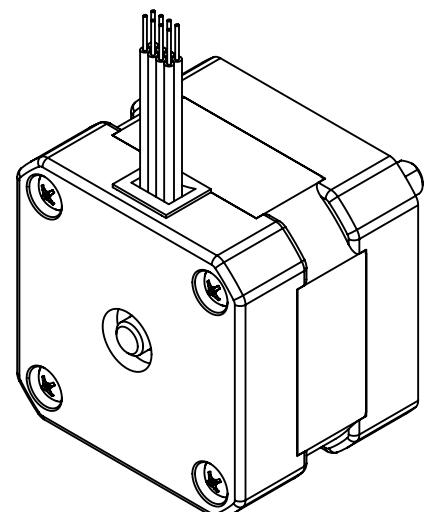
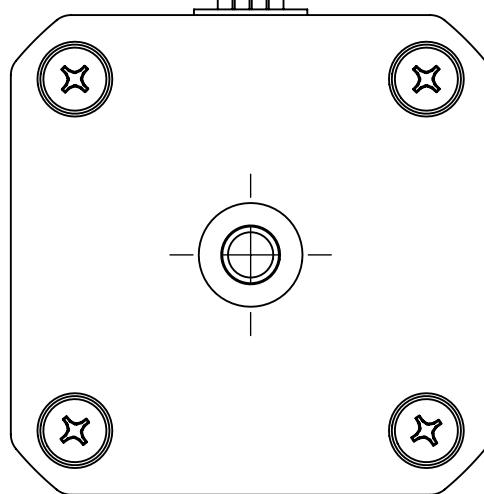
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3

2

1



SECTION A-A
SCALE: 3 : 1

— $\phi 5^0_{-0.012}$



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 <p>Applied Motion Products A MOONS' COMPANY</p>	THIRD ANGLE PROJECTION			<p>NAME: C.BREUNINGER DATE: 01/16/24 PRE.CHECK PRE.APPROVAL FIN.CHECK E.MERINO 01/17/24 SAP: 4611110029085 ALT DWG. NO.: ALT SAP:</p>	TITLE: STEPPER MOTOR	
	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS					
	TOLERANCES: - ANGULAR: ± 0.5 - ONE DECIMAL PLACE: ± 0.25 - TWO DECIMAL PLACES: ± 0.13					
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	MATERIAL					
	FINISH					
	DO NOT SCALE DRAWING					
	SIZE		DWG. NO.		REV	
	B		HT17-268		J	
SCALE: 1:2		SHEET 2 OF 2				