

SPECIFICATION			
NUMBER OF PHASES: 4		ROTOR INERTIA: 38 g-cm <sup>2</sup> (0.21 oz-in <sup>2</sup> ) 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°	1	,	2
BEARINGS: ABEC 3, DOUBLE SHIELDED			
POSITION ACCURACY: 0.09°	1	,	3
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: 200 g (7.1 oz ) APPROXIMATE	

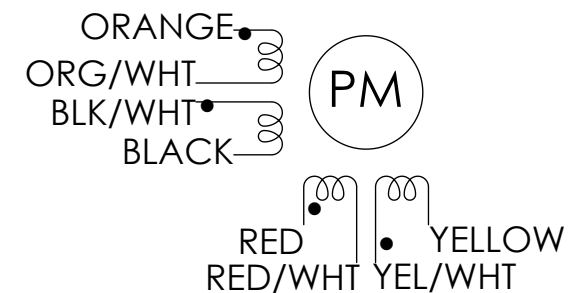
CONNECTION	RESISTANCE PER PHASE (ohm $\pm 10\%$ ) <span>7</span>	INDUCTANCE PER PHASE (mH $\pm 20\%$ ) <span>8</span>	RATED CURRENT (Amp)	HOLDING TORQUE (Nm MIN) <span>1</span>	HOLDING TORQUE (oz-in MIN) <span>1</span>
BI-POLAR SERIES	8.4	10	0.67	0.22	31.1
BI-POLAR PARALLEL	2.1	2.5	1.34	0.22	31.1
UNI-POLAR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

<div><div><b>Applied Motion Products</b> <b>A MOONS' COMPANY</b></div></div> <div><b>PROPRIETARY AND CONFIDENTIAL</b>  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	C.BREUNINGER	01/16/24			
			PRE.CHECK					
			PRE.APPROVAL					
			FIN.CHECK	E.MERINO	01/17/24	SIZE <b>B</b>	DWG. NO.  HT17-268	REV  J
	MATERIAL		SAP: 4611110029085					
	FINISH		ALT DWG. NO.:					
	DO NOT SCALE DRAWING		ALT SAP:			SCALE: 1:1		SHEET 1 OF 2

4

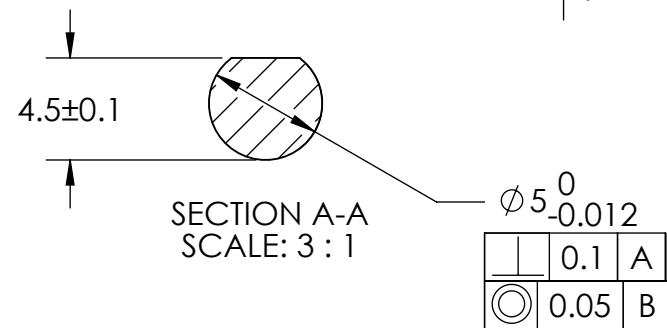
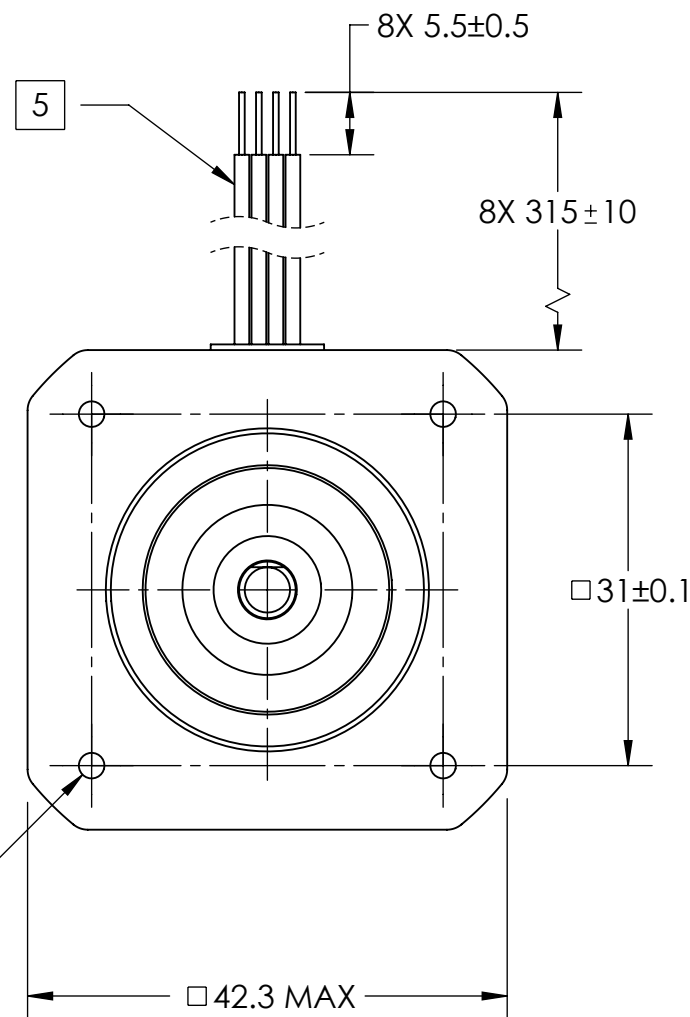
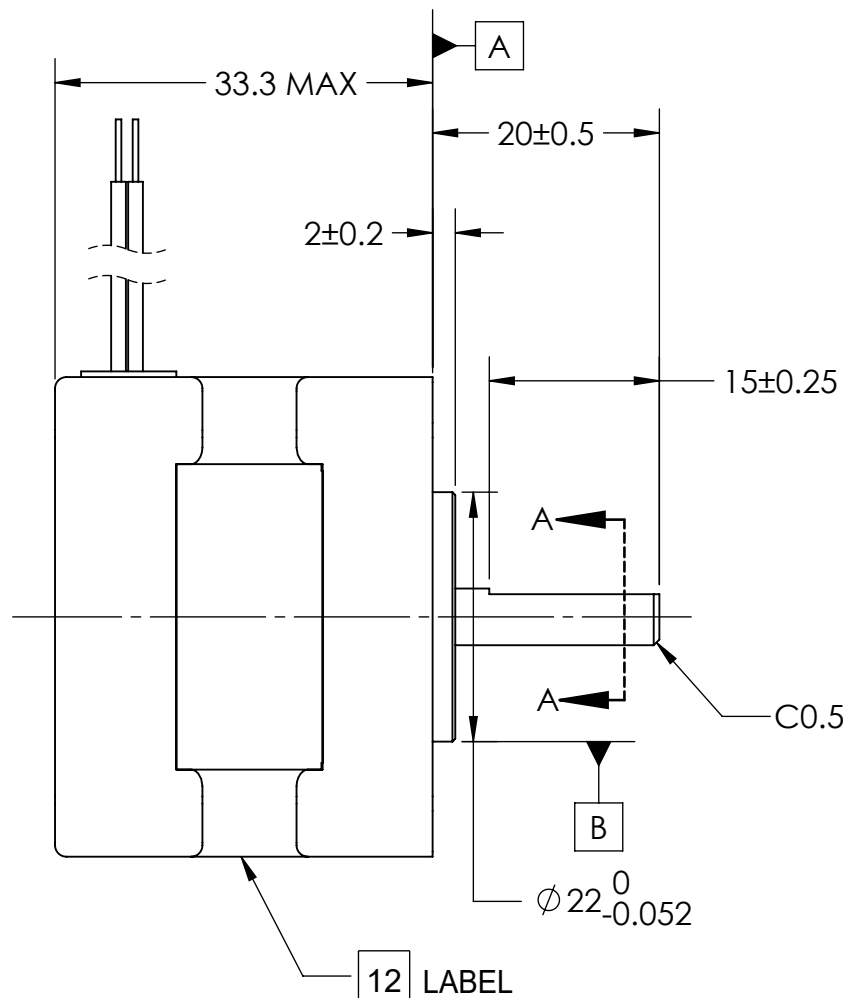
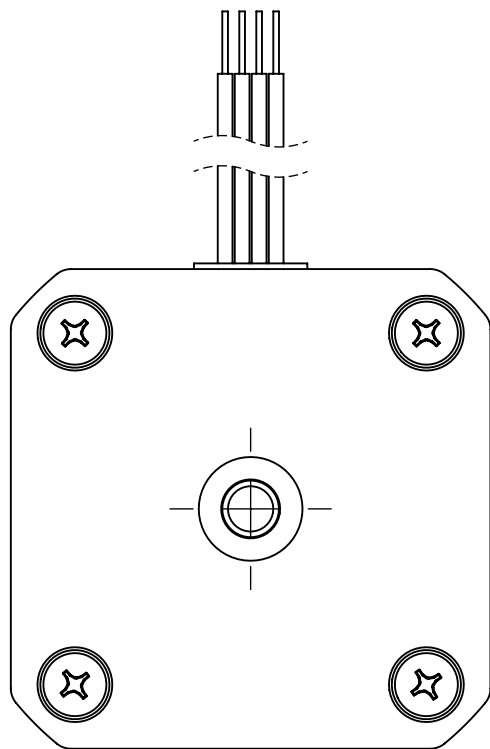
3

2

1

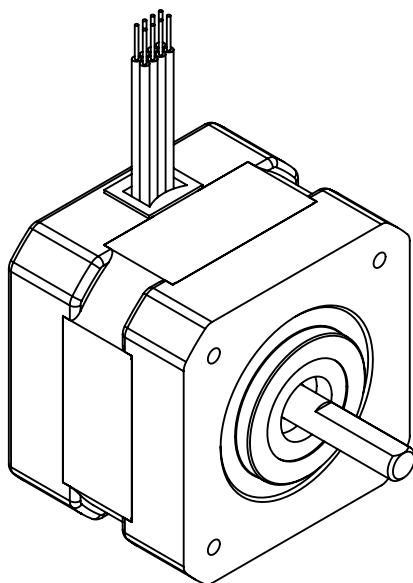
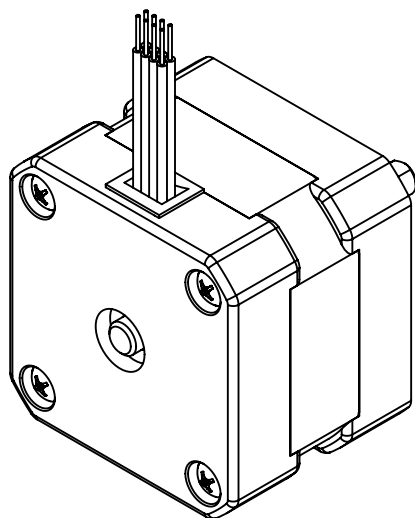
B


B



A

A



<div><b>Applied Motion Products</b> A MOONS' COMPANY</div> <div>PROPRIETARY AND CONFIDENTIAL</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	C.BREUNINGER	01/16/24							
			PRE.CHECK									
	MATERIAL		PRE.APPROVAL			SIZE  B			DWG. NO.  HT17-268		REV  J	
			FIN.CHECK	E.MERINO	01/17/24							
	FINISH		SAP: 4611110029085				SCALE: 1:2				SHEET 2 OF 2	
	DO NOT SCALE DRAWING		ALT DWG. NO.:									
			ALT SAP:									

4

3

2

1