

## SPECIFICATION

NUMBER OF PHASES: 4	ROTOR INERTIA: $38 \text{ g-cm}^2$ (0.20 oz-in $^2$ ) NOM
STEPS PER REVOLUTION: 200	DETENT TORQUE: $122.3 \text{ g-cm}$ (1.69 oz-in) MIN
STEP ANGLE: $1.8^\circ$	INSULATION CLASS: B
STEP TO STEP ACCURACY: $0.09^\circ$	BEARINGS: ABEC 3, DOUBLE SHIELDED
POSITION ACCURACY: $0.09^\circ$	TEMP. RISE: $80^\circ\text{C}$ MAX. <span style="border: 1px solid black; padding: 2px;">9</span>
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: 210 g (7.3 oz) APPROXIMATE

CONNECTION	RESISTANCE PER PHASE (ohm $\pm 10\%$ ) <span style="border: 1px solid black; padding: 2px;">7</span>	INDUCTANCE PER PHASE (mH $\pm 20\%$ ) <span style="border: 1px solid black; padding: 2px;">8</span>	RATED CURRENT (Amp)	HOLDING TORQUE (Nm MIN) <span style="border: 1px solid black; padding: 2px;">1</span>	HOLDING TORQUE (oz-in) <span style="border: 1px solid black; padding: 2px;">1</span>
BI-POLAR SERIES	8.4	10	0.67	0.22	31.15
BI-POLAR PARALLEL	2.1	2.5	1.34	0.22	31.15
UNI-POLAR	4.2	2.5	0.95	0.16	22.66

## 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  $360^\circ$ .
4. HIPOT 500 VAC, 60Hz FOR ONE MINUTE.
- 5 LEADS: 8, 26 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 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.

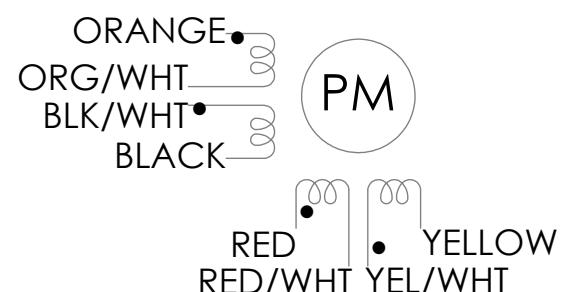
REVISIONS				
ECO #	REV.	DESCRIPTION	DATE	APPROVED
8675	A	INITIAL RELEASE	6/15/21	LEO. L

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

## WIRING DIAGRAM



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.

UNLESS OTHERWISE SPECIFIED:	NAME	DATE	TITLE:  STEPPER MOTOR OUTLINE	
DIMENSIONS ARE IN MILLIMETERS	ALAN. N	6/15/20		
TOLERANCES: ANGULAR: $\pm 0.5$ ONE PLACE DECIMAL $\pm 0.25$ TWO PLACE DECIMAL $\pm 0.13$ THIRD ANGLE PROJECTION	KEVIN. K	6/15/20		
MATERIAL	COMMENTS:			
FINISH	DO NOT SCALE DRAWING			
DO NOT SCALE DRAWING	SCALE: 1:1			
SIZE	DWG. NO.	REV		
<b>B</b>	HT17-268D-WAA	A		
SCALE: 1:1	WEIGHT:	SHEET 1 OF 2		

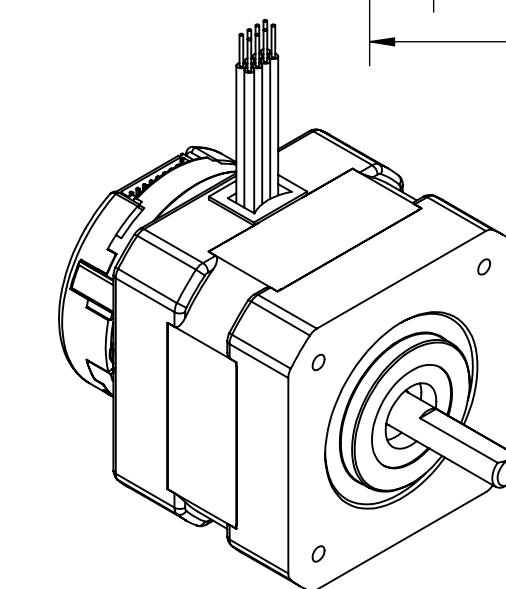
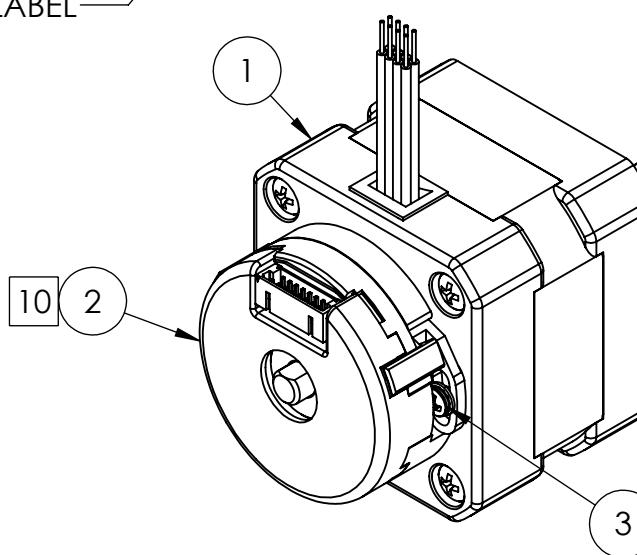
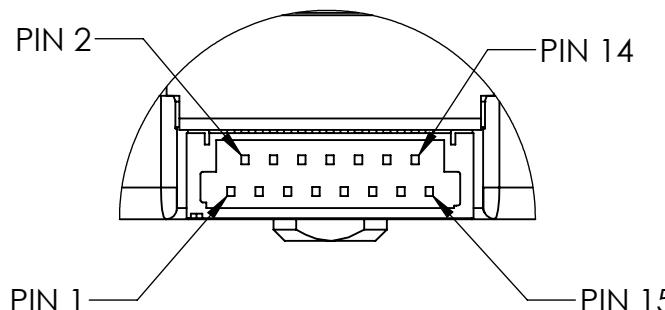
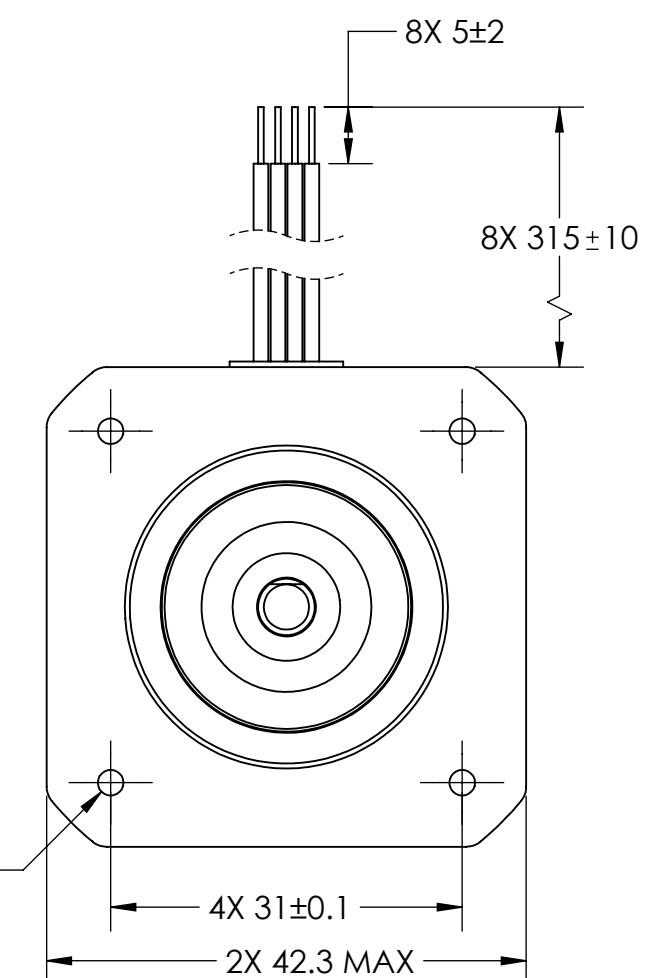
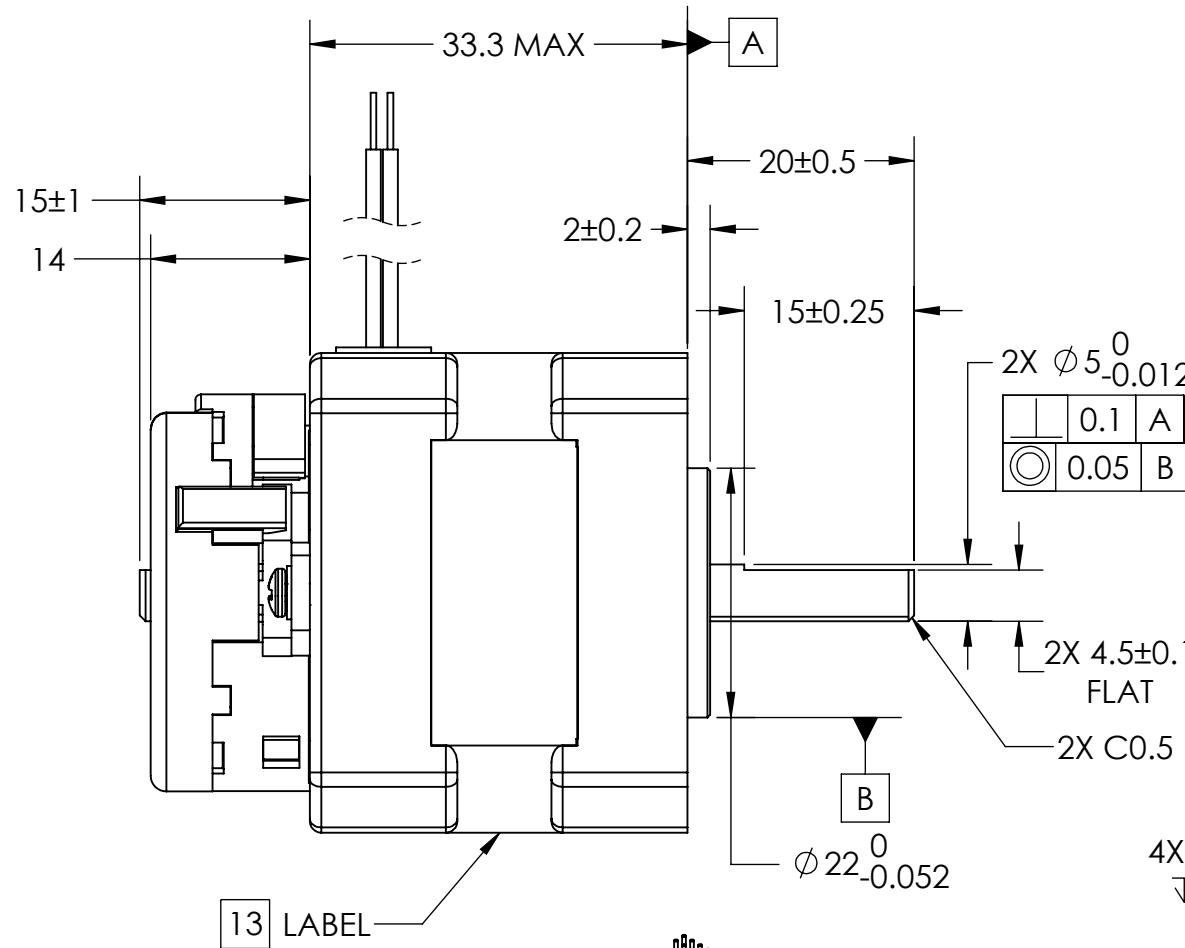
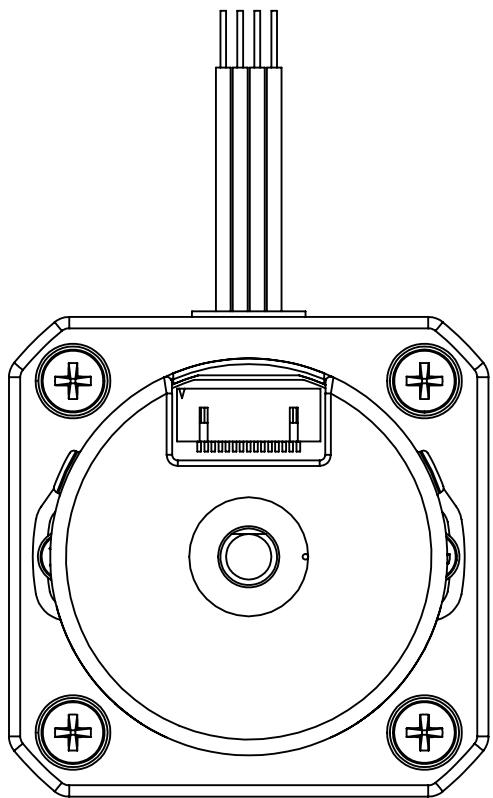
4

3

2

1

B



CONNECTOR	
PIN #	SIGNAL
1	CH A
2	CH A-
3	CH B
4	CH B-
5	INDEX
6	INDEX-
7	CH U
8	CH U-
9	CH V
10	CH V-
11	CH W
12	CH W-
13	+VCC
14	GND
15	N/A

ITEM NO.	PART NUMBER	QTY.
1	HT17-268D	1
2	ENCODER 970-1012	1
3	SCREW 2-56 X .1875 W-TOOTH LOCK WASHER (90403A077) OR EQUIVALENT	2



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DIMENSIONS ARE IN MILLIMETERS  
TOLERANCES:  
ANGULAR:  $\pm 0.5$   
ONE PLACE DECIMAL  $\pm 0.25$   
TWO PLACE DECIMAL  $\pm 0.13$   
THIRD ANGLE PROJECTION  
MATERIAL  
FINISH  
DO NOT SCALE DRAWING

DRAWN	ALAN. N	6/15/20
CHECKED	KEVIN. K	6/15/20

COMMENTS:

TITLE: STEPPER MOTOR OUTLINE  
SIZE DWG. NO. B HT17-268D-WAA REV A  
SCALE: 1:2 WEIGHT: SHEET 2 OF 2