

SPECIFICATIONS:

NUMBER OF PHASES: 4	ROTOR INERTIA: 480 g-cm <sup>2</sup> (2.62 oz-in <sup>2</sup> ) NOM
STEPS PER REVOLUTION: 200	DETENT TORQUE: N/A mNm (N/A 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.
ENCODER RESOLUTION: 2000 LINES (8000 CPR)	OPERATING TEMP. RANGE: -20 TO +50 °C
SHAFT RUNOUT: 0.05 mm T.I.R. MAX	STORAGE TEMP. RANGE: -40 TO +70 °C
RADIAL PLAY: 0.02mm MAX (450g LOAD)	RELATIVE HUMIDITY RANGE: 5 TO 95%
AXIAL PLAY: 0.08mm MAX (1 kg LOAD)	WEIGHT: 1.0 kg (2.2 lbf ) APPROXIMATE

CONNECTION	NUMBER OF PHASES	RESISTANCE PER PHASE (ohm $\pm 10\%$ ) <span style="border: 1px solid black; padding: 0 5px;">7</span>	INDUCTANCE PER PHASE (mH $\pm 20\%$ ) <span style="border: 1px solid black; padding: 0 5px;">8</span>	RATED CURRENT (Amp)	HOLDING TORQUE (Nm)Min. <span style="border: 1px solid black; padding: 0 5px;">1</span>	HOLDING TORQUE (ozf-in.)Min. <span style="border: 1px solid black; padding: 0 5px;">1</span>
BI-POLAR SERIES	2	18	60.8	0.71	1.6	226
BI-POLAR PARALLEL	2	4.5	15.2	1.41	1.6	226
UNIPOLAR	4	9.0	15.2	1.0	1.3	184

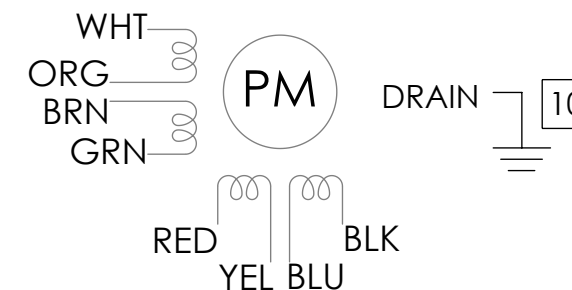
**NOTES, UNLESS OTHER WISE SPECIFIED:**

- 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, 24 AWG, 7 STRAND MIN. UL AND CSA APPROVED. UL 1430 OR UL 3265. CABLE, 8 COND. W/DRAIN. CABLE 666-2107
6. INSULATION RESISTANCE: 100 MEGOHMS MIN AT 500 VDC.
- 7 MEASUREMENTS MADE WITHOUT CABLE.
- 8 AS MEASURED ACROSS ANY WINDING USING AN A.C. INDUCTANCE BRIDGE AT 1KHz.
- MEASUREMENTS MADE WITHOUT CABLE.
- 9 AS MEASURED BY THE CHANGE IN RESISTANCE METHOD, WITH RATED CURRENT APPLIED TO 2 PHASES WITH MOTOR AT REST.
- 10 DRAIN WIRE TO BE CONNECTED TO INSIDE OF REAR END BELL. LOCATION MAY VARY
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.
- 13 ENCODER 970-1001 INSTALLED PER AMP ASSEMBLY PRACTICES.

## REVISIONS

ECO #	REV.	DESCRIPTION	DATE	APPROVED
6941	A	INITIAL RELEASE	06/16/14	J.KORDIK
8034	B	CHG REAR SHAFT LENGTH/TYPO	08/28/18	M.MARONEY
8991	C	MOVE TO SOLIDWORKS FORMAT	09/29/23	K.KESLER

## WIRING DIAGRAM




## DRIVE SEQUENCE MODEL BI-POLAR SERIES FULL STEP

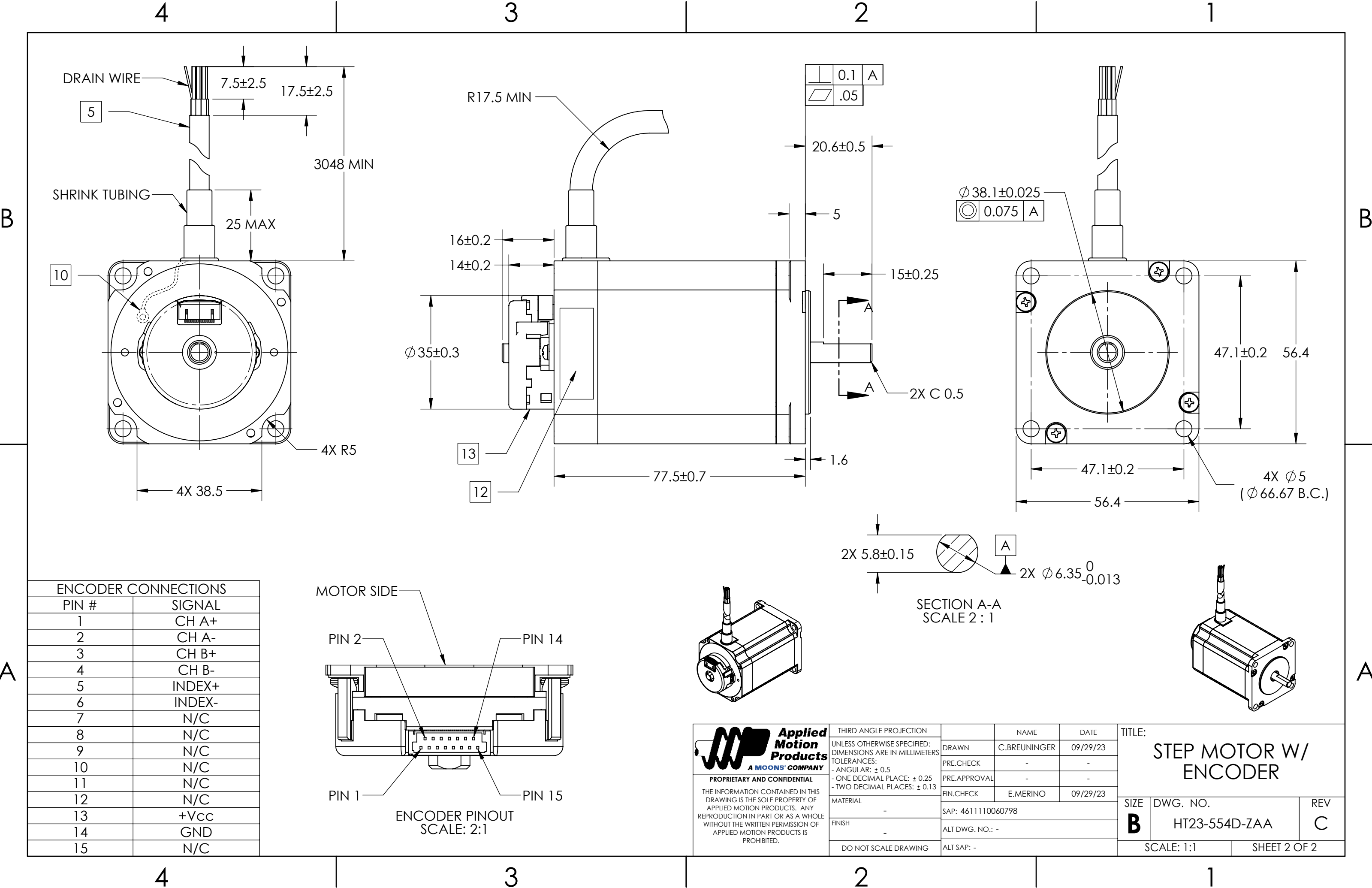
STEP	(A+) WHT	(A-) GRN	(B+) RED	(B-) BLK
1	+	-	+	-
2	-	+	+	-
3	-	+	-	+
4	+	-	-	+
1	+	-	+	-

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



 <div><b>Applied Motion Products</b> A MOONS' COMPANY</div>	THIRD ANGLE PROJECTION			NAME	DATE	TITLE:  STEP MOTOR W/ ENCODER			
	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS TOLERANCES: - ANGULAR: ± 0.5 - ONE DECIMAL PLACE: ± 0.25 - TWO DECIMAL PLACES: ± 0.13		DRAWN	C.BREUNINGER	09/29/23				
			PRE.CHECK	-	-				
			PRE.APPROVAL	-	-				
<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.	MATERIAL  -		FIN.CHECK		E.MERINO	09/29/23	SIZE  <b>B</b>	DWG. NO.  HT23-554D-ZAA	REV  C
	FINISH  -		SAP: 4611110060798						
			ALT DWG. NO.: -						
	DO NOT SCALE DRAWING		ALT SAP: -						

SCALE: 1:1		SHEET 1 OF 2	
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TOLERANCES:	PRE.CHECK	-	-
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MATERIAL	ALT DWG. NO.: -		
FINISH	ALT SAP: -		
DO NOT SCALE DRAWING			

TITLE:			
STEP MOTOR W/ ENCODER			
SIZE	DWG. NO.	REV	
B	HT23-554D-ZAA	C	
SCALE: 1:1		SHEET 2 OF 2	