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## 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: 2060 G (4.6 LB ) APPROXIMATE

CONNECTION	RESISTANCE PER PHASE (ohm ±10%)	INDUCTANCE PER PHASE (mH ±20%)	RATED CURRENT (Amp)	HOLDING TORQUE (Nm MIN)	HOLDING TORQUE (oz-in)
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 BRAKE ATTACHED TO REAR END OF MOTOR. TWO BREAK LEADS ARE 24 AWG, UL1332, RED="+".
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.

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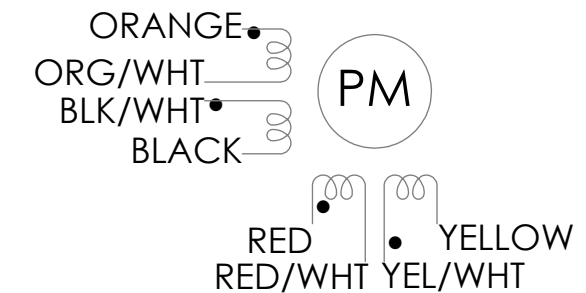
## BRAKE SPECIFICATIONS

VOLTAGE	CURRENT	POWER	TORQUE	MAX. SPEED	ENGAGE DELAY	DISENGAGE DELAY	INSULAGION CLASS
24 VDC	167 mA	4 W	1.5 Nm	1000 RPM	50 ms	50 ms	B

## REVISIONS

ECO #	REV.	DESCRIPTION	DATE	APPROVED
7462	A	INITIAL RELEASE	8/9/16	J. KORDIK
7852	B	REVISED MOTOR WEIGHT	2/16/18	J. KORDIK
8705	C	UPDATED SHAFT RUNOUT AND END BELL THICKNESS	8/23/21	L. LIU
8787	D	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	CCW
1	+	-	+	-	↑
2	-	+	+	-	
3	-	+	-	+	
4	+	-	-	+	
1	+	-	+	-	

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

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	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	DRAWN	Y. LAPNET	5/20/22	STEPPER MOTOR	
	TOLERANCES: - ANGULAR: ± 0.5 - ONE DECIMAL PLACE: ± 0.25 - TWO DECIMAL PLACES: ± 0.13	PRE.CHECK				
	MATERIAL	FIN.CHECK	C. BREUNINGER	5/20/22	SIZE	
	FINISH	DO NOT SCALE DRAWING	ALT DWG. NO.:	ALT SAP:	DWG. NO.	
				REV		
				B	HT23-603B	D
				SCALE: 1:1	SHEET 1 OF 2	

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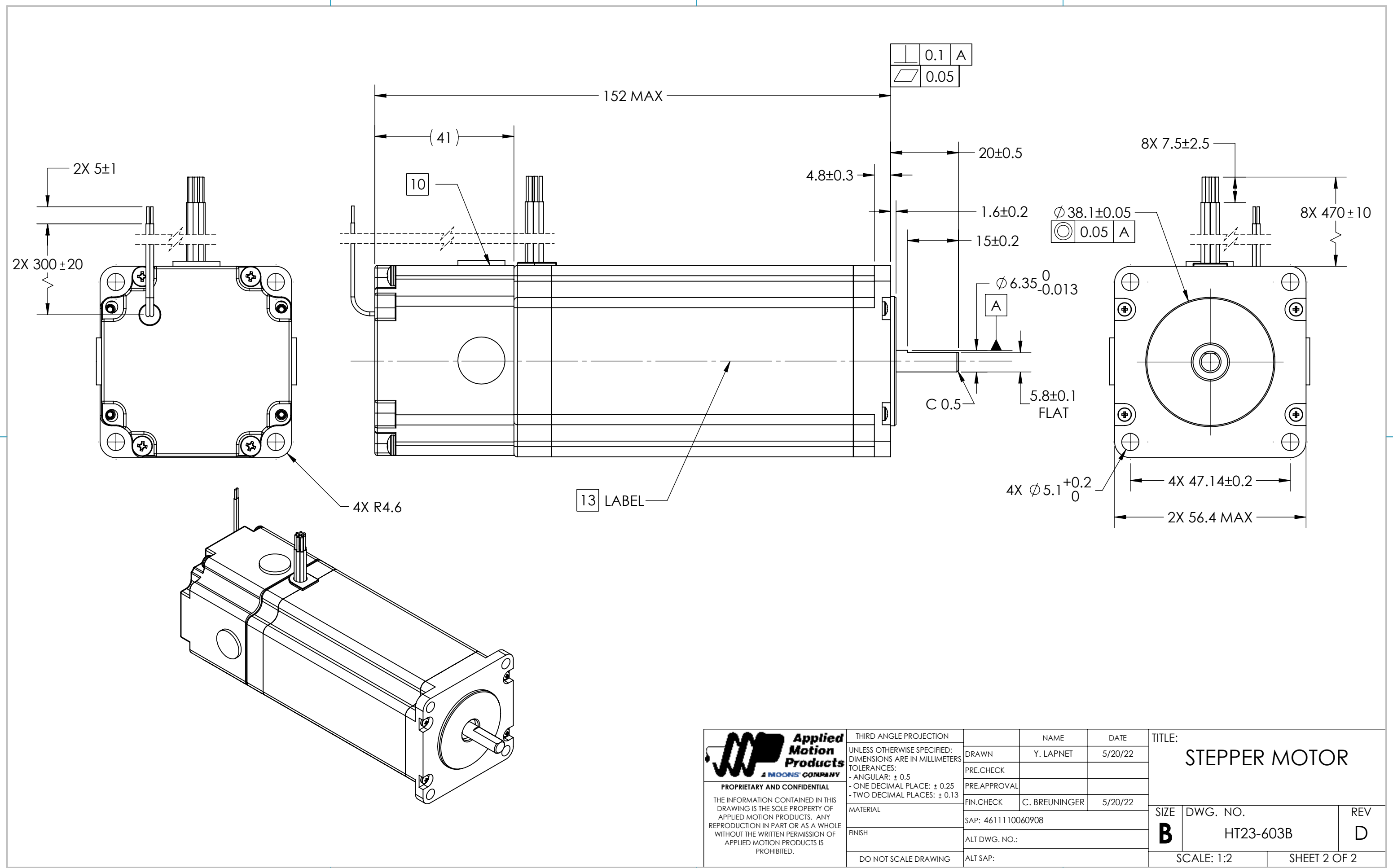
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 <p><b>Applied Motion Products</b> A MOONS' COMPANY</p> <p>PROPRIETARY AND CONFIDENTIAL</p> <p>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APPLIED MOTION PRODUCTS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF APPLIED MOTION PRODUCTS IS PROHIBITED.</p>	THIRD ANGLE PROJECTION	NAME	DATE	TITLE: <b>STEPPER MOTOR</b>		
	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	DRAWN	Y. LAPNET			5/20/22
	TOLERANCES:	PRE.CHECK			SIZE <b>B</b>	DWG. NO. HT23-603B
	- ANGULAR: ± 0.5	PRE.APPROVAL				
	- ONE DECIMAL PLACE: ± 0.25	FIN.CHECK	C. BREUNINGER	5/20/22	SCALE: 1:2	
- TWO DECIMAL PLACES: ± 0.13	MATERIAL	SAP: 4611110060908		SHEET 2 OF 2		
DO NOT SCALE DRAWING	FINISH	ALT DWG. NO.:				