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MOTOR SPECIFICATIONS:

NUMBER OF PHASES:	2	ROTOR INERTIA (g-cm ² /oz-in ²):	9/0.05 NOM
STEPS PER REVOLUTION:	200	INSULATION CLASS:	B (130°C)
STEP ANGLE (°):	1.8	BEARINGS:	ABEC 3, DOUBLE SHIELDED

CONNECTION	RESISTANCE PER PHASE 5	INDUCTANCE PER PHASE 6	RATED CURRENT	HOLDING TORQUE 1	
	ohm ±10%	mH ±20%	AMP	mNm MIN	oz-in MIN
BI-POLAR	1.4	1.3	1.0	50	7.08

GEARMOTOR SPECIFICATIONS:

TEMP. RISE (°C): 7	80 MAX	TOTAL WEIGHT (±10g/±0.35oz):	150/5.29
OPERATING AMB. TEMP. RANGE (°C):	-10 to +50	RELATIVE HUMIDITY RANGE (%):	85 NON-CONDENSING
STORAGE TEMP. RANGE (°C):	0 to +40		

GEARHEAD SPECIFICATIONS:

RATIO:	4:1	EFFICIENCY (%):	90
MAX TORQUE CONTINUOUS (Nm/oz-in):	0.5/70.8	BACKLASH (°):	≤1.2
MAX TORQUE (Nm/oz-in):	0.8/113.3	MAX RADIAL LOAD (N/lbf):	≤20/4.49
MAX INPUT SPEED (RPM):	6000	MAX AXIAL LOAD (N/lbf):	≤20/4.49

NOTES, UNLESS OTHER WISE SPECIFIED:

- 1 MEASUREMENTS MADE AT RATED CURRENT IN EACH PHASE.
2. HIPOT 500 VAC, 60Hz FOR ONE MINUTE.
- 3 LEADS: 4, 26 AWG, 7 STRAND MIN. UL AND CSA APPROVED. UL 1007.
4. INSULATION RESISTANCE: 100 MEGOHMS MIN AT 500 VDC.
- 5 AS MEASURED ACROSS EACH PHASE.
- 6 AS MEASURED ACROSS EACH PHASE USING AN A.C. INDUCTANCE BRIDGE AT 1KHz.
- 7 AS MEASURED BY THE CHANGE IN RESISTANCE METHOD, WITH RATED CURRENT APPLIED TO 2 PHASES; WITH MOTOR AT REST.
8. THIS MOTOR IS MANUFACTURED IN COMPLIANCE WITH CURRENT EU RoHS DIRECTIVE.
- 9 MOTOR LABEL TO INCLUDE AMP LOGO, AMP WEBSITE ADDRESS, "RoHS" COMPLIANCE LOGO, AMP P/N, 'MADE IN (COUNTRY)', AND DATE CODE.
- 10 ADD "D" TO PART NUMBER IF DOUBLE SHAFT IS REQUIRED.
DOUBLE SHAFT REQUIRES ADDED HOLES FOR ENCODER OPTION.

REVISIONS

ECO #	REV.	DESCRIPTION	DATE	APPROVED
7935	A	INITIAL RELEASE	7/2/18	J. KORDIK
8429	B	TYP0 CORRECTION	3/3/20	J. KORDIK
8758	C	REDRAWN IN SOLIDWORKS	4/18/22	L. LIU

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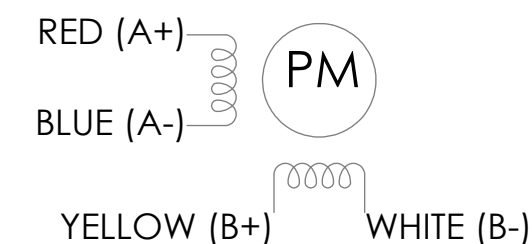
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WIRING DIAGRAM

DRIVE SEQUENCE MODEL
BI-POLAR FULL STEP

STEP	A+	A-	B+	B-	ROTATION
1	+	-	+	-	CCW ↑
2	-	+	+	-	
3	-	+	-	+	
4	+	-	-	+	
1	+	-	+	-	

↓ CW

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

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THIRD ANGLE PROJECTION		NAME	DATE	TITLE:
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		DRAWN	4/18/22	
TOLERANCES:		PRE.CHECK		
- ANGULAR: ± 0.5		PRE.APPROVAL		SIZE DWG. NO. REV
- ONE DECIMAL PLACE: ± 0.25		FIN.CHECK	4/18/22	
- TWO DECIMAL PLACES: ± 0.13		SAP: 4611110060153		SCALE: 2:1
MATERIAL		ALT DWG. NO.:		SHEET 1 OF 2
FINISH		ALT SAP:		
DO NOT SCALE DRAWING				

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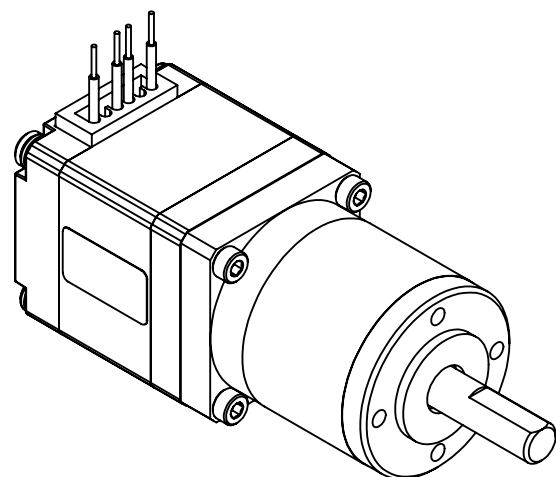
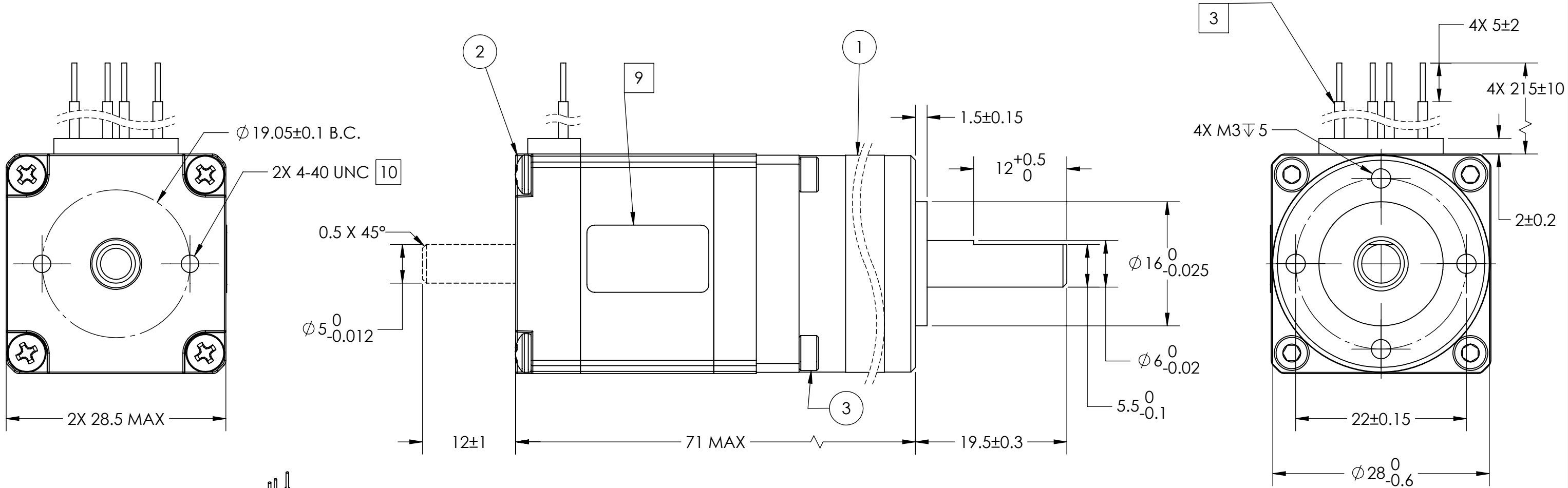
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B

B



A

A

ITEM NO.	SAP PART NUMBER	PART NUMBER	DESCRIPTION	QTY.
1	4332401001497	28PH004.00-L1	PH GEARHEAD	1
2	4611110012628	HT11-020 10	STEP MOTOR	1
3	4294404001453	91292A012 OR EQUIVALENT	M2.5X8MM STAINLESS STEEL SOCKET HEAD SCREW	4

GEARHEAD MATERIALS:	
GEARTRAIN:	Y100 (1144) STEEL
HOUSING:	304 STAINLESS STEEL
INPUT/OUTPUT FLANGE:	LY12 ALUMINUM
OUTPUT SHAFT:	40Cr STEEL
PINION:	Y100 (1144) STEEL

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THIRD ANGLE PROJECTION	NAME	DATE
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS	DRAWN	Y. LAPNET
TOLERANCES:	PRE.CHECK	4/18/22
- ANGULAR: ± 0.5	PRE.APPROVAL	
- ONE DECIMAL PLACE: ± 0.25	FIN.CHECK	C. BREUNINGER
- TWO DECIMAL PLACES: ± 0.13	SAP: 4611110060153	4/18/22
MATERIAL	ALT DWG. NO.:	
FINISH	ALT SAP:	
DO NOT SCALE DRAWING		

TITLE:		
STEPPER MOTOR W/ GEARHEAD		
SIZE	DWG. NO.	REV
B	HT11-020-G004	C
SCALE: 2:1		SHEET 2 OF 2

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