

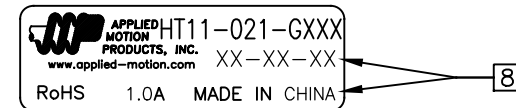
MOTOR SPECIFICATIONS:	GEARMOTOR SPECIFICATIONS:
NUMBER OF PHASES: 2	TEMP. RISE: 80°C MAX. <span style="border: 1px solid black; padding: 0 2px;">6</span>
STEPS PER REVOLUTION: 200	OPERATING AMB. TEMP. RANGE: -20 TO +50 °C
STEP ANGLE: 1.8°	STORAGE TEMP. RANGE: -20 TO +70 °C
RATED CURRENT: 1.0 A	RELATIVE HUMIDITY: 85% MAX NON-CONDENSING
RESISTANCE PER PHASE: 2.0 Ohms <span style="border: 1px solid black; padding: 0 2px;">4</span>	
INDUCTANCE PER PHASE: 2.4 mH <span style="border: 1px solid black; padding: 0 2px;">5</span>	
ROTOR INERTIA: 18 g-cm <sup>2</sup> ( 0.10 oz-in <sup>2</sup> )NOM	
HOLDING TORQUE 0.10 Nm ( 14.16 oz-in)NOM	
INSULATION CLASS: B (130°C)	
BEARINGS: ABEC 3, DOUBLE SHIELDED, NS7 GREASE	

NOTES, UNLESS OTHERWISE SPECIFIED:

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

REVISIONS				
ECO NO.	REV	DESCRIPTION	DATE	APPROVED
7935	A	PRELIMINARY RELEASE	7/2/18	J.KORDIK
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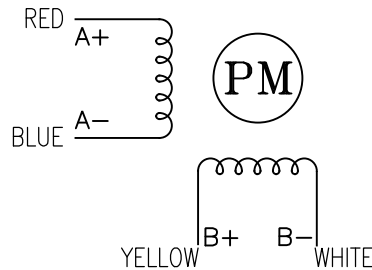
LABEL DETAIL



SWITCHING SEQUENCE FOR CW ROTATION  
FACING MOUNTING END

STEP	RED	BLUE	YELLOW	WHITE
0	+	-	+	-
1	-	+	+	-
2	-	+	-	+
3	+	-	-	+
4	+	-	+	-

CW  
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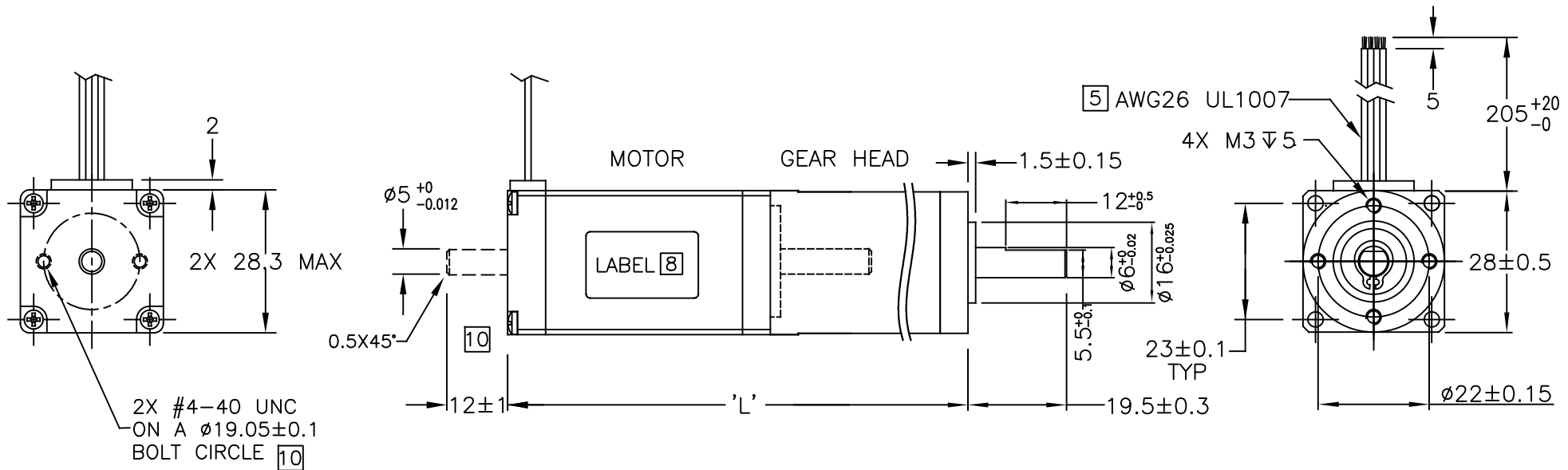
CONTRACT NO. —		APPLIED MOTION PRODUCTS, INC.		
APPROVALS	DATE	<b>STEP MOTOR WITH GEARHEAD ASSEMBLY - OUTLINE DRAWING</b>		
DRAWN R.JONEZ	4/23/18			
CHECKED	—	B	COMPUTER DATA BASE DRAWING	DWG NO. HT11-021-GXXX
APPROVED	—		REV A	
APPROVED	—	SCALE: NONE	SHEET 1 OF 2	

**GEARMOTOR TECHNICAL DETAILS:**

ASSEMBLY P/N	HT11-021-G004	HT11-021-G005	HT11-021-G012	HT11-021-G014	HT11-021-G022
TOTAL WEIGHT-MOTOR & GEARHEAD	250 g ( 0.55 lbs)	250 g ( 0.55 lbs)	265 g ( 0.58 lbs)	265 g ( 0.58 lbs)	265 g ( 0.58 lbs)
ASSEMBLY LENGTH - TOTAL 'L'	91.6 mm ( 3.61 in)	93.8 mm ( 3.69 in)	94.1mm ( 3.70 in)	94.1mm ( 3.70 in)	101.6 mm ( 4.0 in)

**GEARHEAD TECHNICAL DETAILS:**

GEARHEAD P/N	28PH004.00-L1	28PH005.50-L1	28PH012.76-L1	28PH014.29-L1	28PH022.00-L1
RATIO	4:1	5.5:1	12.76:1	14.29:1	22.01:1
MAX TORQUE CONTINUOUS	0.5 Nm ( 70.80 oz-in)	0.5 Nm ( 70.80 oz-in)	2.0 Nm ( 283.22 oz-in)	2.0 Nm ( 283.22 oz-in)	2.0 Nm ( 283.22 oz-in)
MAX TORQUE	0.8 Nm ( 113.3 oz-in)	0.8 Nm ( 113.3 oz-in)	4.0 Nm ( 566.45 oz-in)	4.0 Nm ( 566.45 oz-in)	4.0 Nm ( 566.45 oz-in)
MAX RADIAL LOAD	≤ 20 N ( 4.5 lbs)	≤ 20 N ( 4.5 lbs)	≤ 20 N ( 4.5 lbs)	≤ 20 N ( 4.5 lbs)	≤ 20 N ( 4.5 lbs)
MAX AXIAL LOAD	≤ 20 N ( 4.5 lbs)	≤ 20 N ( 4.5 lbs)	≤ 20 N ( 4.5 lbs)	≤ 20 N ( 4.5 lbs)	≤ 20 N ( 4.5 lbs)
INERTIA	1.0 g-cm <sup>2</sup> ( 0.005oz-in <sup>2</sup> )	1.0 g-cm <sup>2</sup> ( 0.005oz-in <sup>2</sup> )	0.6 g-cm <sup>2</sup> ( 0.003oz-in <sup>2</sup> )	0.6 g-cm <sup>2</sup> ( 0.003oz-in <sup>2</sup> )	0.6 g-cm <sup>2</sup> ( 0.003oz-in <sup>2</sup> )
BACKLASH	≤ 1.2 °	≤ 1.2 °	≤ 1.8 °	≤ 1.8 °	≤ 1.8 °
EFFICIENCY	90 %	90 %	81 %	81 %	81 %



MATERIAL SPECIFICATIONS	
GEARTRAIN	Y15 (1213) STEEL
HOUSING	304 STAINLESS STEEL
INPUT/OUTPUT FLANGE	LY12 ALUMINUM
OUTPUT SHAFT	40Cr STEEL
PINION	Y15 (1213) STEEL

TOLERANCES
*ALL DIMENSIONS IN MM
DECIMALS: MM
X.XX = ±0.13
X.X = ±0.25
ANGLES:
MACH. = ±0.5°
CHAM. = ±5°
COMPUTER DATA BASE DRAWING

THIRD ANGLE PROJECTION	
APPROVALS	DATE
DRAWN R.JONEZ	4/20/18
CHECKED -	-
APPROVED -	-

**APPLIED  
MOTION  
PRODUCTS, INC.**

**STEP MOTOR WITH GEARHEAD  
ASSEMBLY - OUTLINE DRAWING**

B	DWG NO. HT11-021-GXXX	REV A
SCALE: NONE		SHEET 2 OF 2