



STEPPER MOTOR WITH GEARHEAD SPECIFICATION

MOONS' MODEL
PG22L45.2-20P020L0-47
 4611120001958

版本 REV	描述 DESCRIPTION	日期 DATE
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1. RATED CHARACTERISTICS AND CONDITIONS

NO.	ITEM	SPECIFICATION	REMARK
1.1	Operating Voltage Range	9~30 VDC	with Chopper Driver
1.2	Nominal Voltages	10 & 24 Volts	
1.3	Constant Current	0.5 A/Phase	with Chopper Driver
1.4	Phase Number	Two(2)	Phases A & B
1.5	Gear Ratio	1:45	Planetary Gearhead
1.6	Step Angle	18° /45(=0.4°)	Gear Ratio=1:45
1.7	Excitation Method	Bipolar	with Chopper Driver IC
1.8	Insulation Class	Class B	
1.9	Hall Sensor	45 Signals per Circle	Output shaft of gearhead

2. ELECTRICAL CHARACTERISTICS

NO.	ITEM	SPECIFICATION	REMARK
2.1	Resistance per Phase	6.4 Ω ± 7%	Ø25□
2.2	Inductance per Phase A/B	5.0 mH ± 20%(ref.)	Ø1kHz IV rms
2.3	Output Torque	2.0 kgcm min. 10V, 0.50A, 753pps Full step	
2.4	Step Angle Accuracy	18° ± 6%(as of Motor)	Ø1 pps Full-Step
2.5	Insulation Resistance	100 MΩ min.	Case-lead DC500V
2.6	Dielectric Strength	Leak Current 3mA max.	Case-lead AC600V 1 sec.
2.7	Temperature Rise	65□ max. @1K pps Full-Step	On 100X200X2t Al Plate
2.8	Direction of Rotation	CW & CCW	Seen from Gearhead Side
2.9	Resonant Frequency	200 Hz max.	ØNo Load
3.0	Safety Standard: Conform to EIA&MSL(Japan), UL, CSA, TUV, RoHS		

3. MECHANICAL CHARACTERISTICS

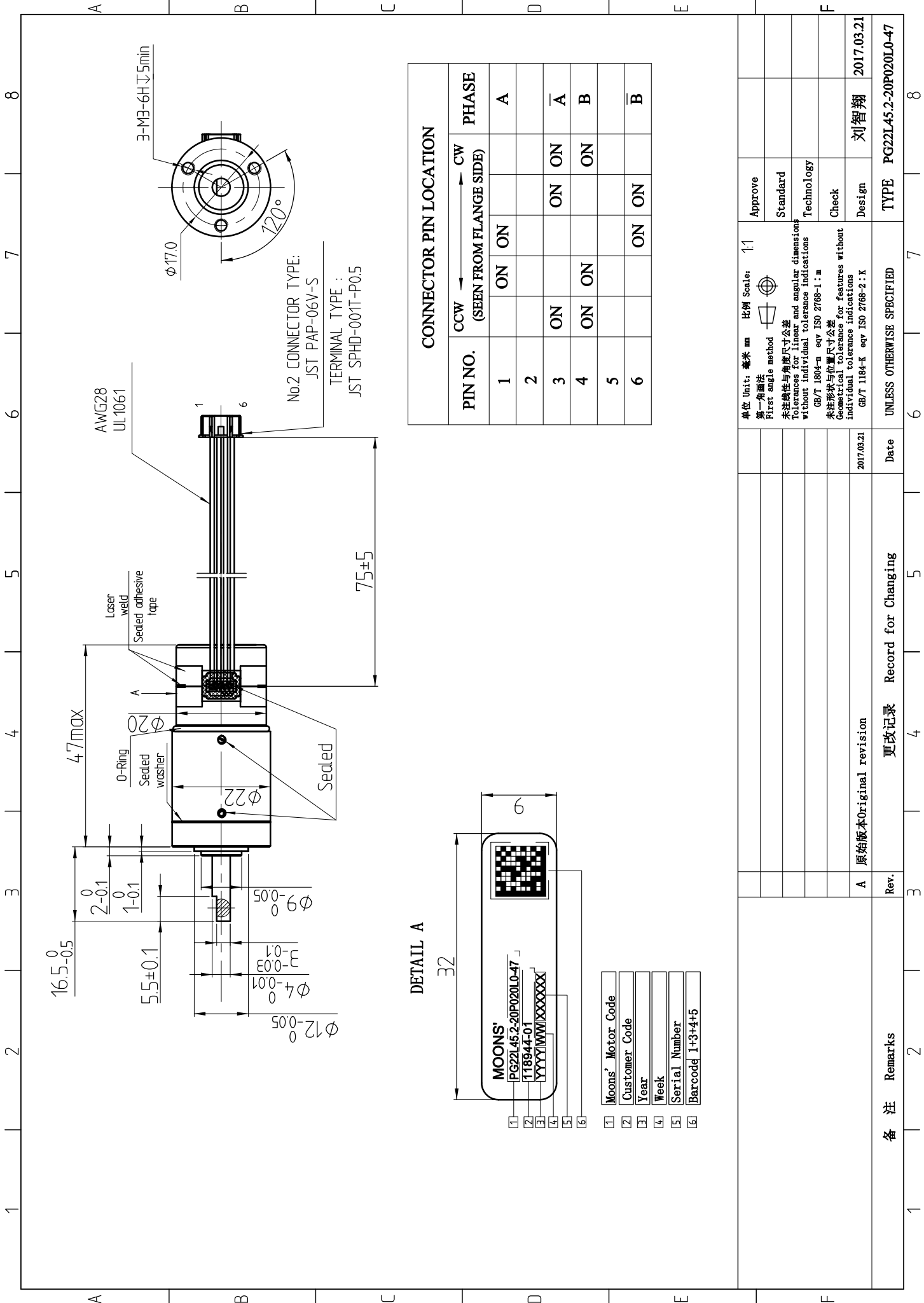
NO.	ITEM	SPECIFICATION	REMARK
3. 1	Outline Dimension	As Attached Outline Drawing	
3. 2	Rated Axial Loading	5 N max.	
3. 3	Rated Axial Bending Load	0. 25 Nm	
3. 4	Axial Press Fit Loading	50 N max.	Gear Head Shaft
3. 5	Radial Backlash	3° max.	Ø no load
3. 6	Shaft Play (Axial/Radial)	0. 25mm/0. 03mm max.	On Bearing Output
3. 7	Noise	50dB	Distance 1m no load
3. 8	Bearing on Output Shaft	Ball Bearing	
3. 9	Rated Weight	90g max.	

4. OPERATING CONDITIONS

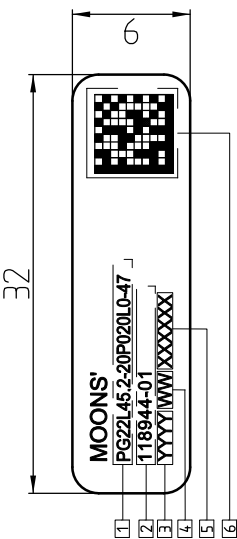
NO.	ITEM	SPECIFICATION	REMARK
4. 1	Ambient Temperature	-40□~+65□	
4. 2	Ambient Humidity	15~85%RH	No Condensation
4. 3	Storage Temperature	-40□~+85□	
4. 4	Storage Humidity	15~85%RH	No Condensation
4. 5	Ingress Protection	IP56	According to IEC 60529

5. RELIABILITY AND WARRANTY

NO.	SPECIFICATION	REMARK
5. 1	3, 000 Hours min.	1. Normal Operating Conditions Ø 10V 2. Full-Step Ø50rpm, CW, No load 3. Electrical & Mechanical Characteristics Preserved
5. 2	Electrical & Mechanical Characteristics Preserved	1. Vibration Test at Package 2. 0~100Hz Sweep for 5 Minutes 3. 1. 5mm, 3 Directional Amplitude for 30 Minutes
5. 3	Electrical & Mechanical Characteristics Preserved	1. Shock Test at Package 2. 30 G, 3 Directions each for 1 time



DETAIL A



- 1 Moons' Motor Code
- 2 Customer Code
- 3 Year
- 4 Week
- 5 Serial Number
- 6 Barcode 1+3+4+5

PIN NO.	CCW ← → CW (SEEN FROM FLANGE SIDE)		PHASE
	ON	ON	
1	ON	ON	A
2			
3	ON	ON	\bar{A}
4	ON	ON	B
5			
6		ON	\bar{B}

Rev.	Remarks	Date	Approval	Check	Design	TYPE
A	原始版本Original revision	2017.03.21	刘智翔	刘智翔	刘智翔	PG22L45.2-20P020L0-47
	更改记录 Record for Changing					
	UNLESS OTHERWISE SPECIFIED					
	单位 Unit: 毫米 mm	比例 Scale: 1:1	Approve	Standard	Technology	
	第一角画法 First angle method		Check	Design		
	未注线性与角度尺寸公差 Tolerances for linear and angular dimensions without individual tolerance indications					
	GB/T 1804-m eqv ISO 2768-1: m					
	未注形状与位置尺寸公差 Geometrical tolerance indications for features without individual tolerance indications					
	GB/T 1184-K eqv ISO 2768-2: K					