



JinLong Machinery

VibratorMotor.com

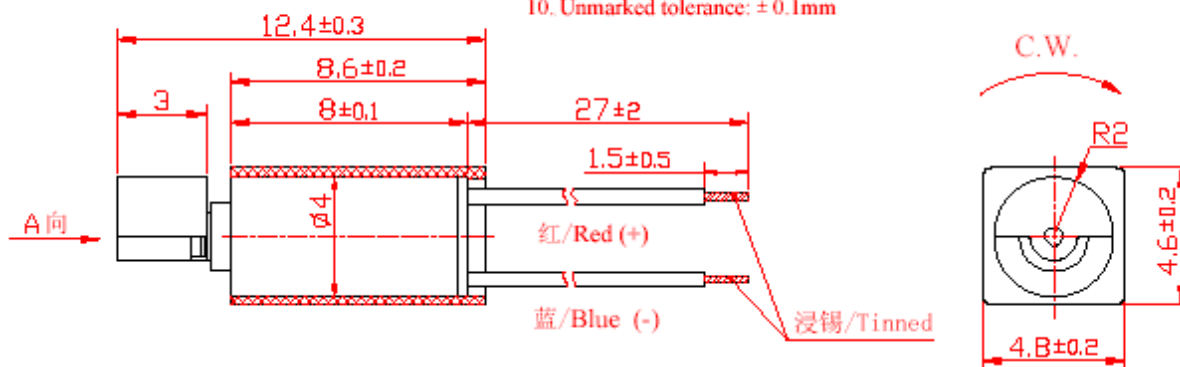
KOTL

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Part No. Z4TL2B0370649

Technical requirement

1. Rated voltage:3.0V
2. Rated current:30mA Max
3. Rated speed:10000 ± 2000rpm
4. Stall current:40mA Max
5. Terminal resistance:93Ω (± 20%)
6. Starting voltage:2.4V Max
7. Shaft end play:0.05~0.2mm
8. Lead wire spec: AWG32 UL1571
9. Overall length is measured after counterweight being pressed against body in direction A. (Shaft end play is not included.)
10. Unmarked tolerance: ± 0.1mm



1. General scope

1-1 The specification applies to the cylindrical permanent-magnetic micro vibration motors DC model **Z4TL2B0370649**.

2. Operating conditions

Items	Specifications	Condition & Remarks
2-1 Rated voltage	3.0V DC	
2-2 Rated load	Counterweight	As specified in 10. Outline drawing
2-3 Rotation	C.W/C.C.W (clockwise or counterwise)	
2-4 Motor position	All positions	
2-5 Operating voltage	2.2~3.6V DC	
2-6 Operating conditions	-30 ~ 70°C, ordinary humidity:65±20%RH	No condensation of moisture.
2-7 Storage conditions	-30 ~ 80°C, ordinary humidity: 65± 20%RH	No condensation of moisture.

3. Measuring conditions

Items		Specifications	Condition & Remarks
3-1	Temperature	20±2°C	
3-2	Humidity	(63% ~ 67%) RH	
3-3	Motor position	Motor Shaft horizontal	Lock the motor in a test fixture.

3-4 The measurement at 20 & 65%RH is standard. If the judgment is not questionable, recognize measurement at 5 to 35 & relative humidity 45% to 85%. Direction of motor is shaft horizontal.

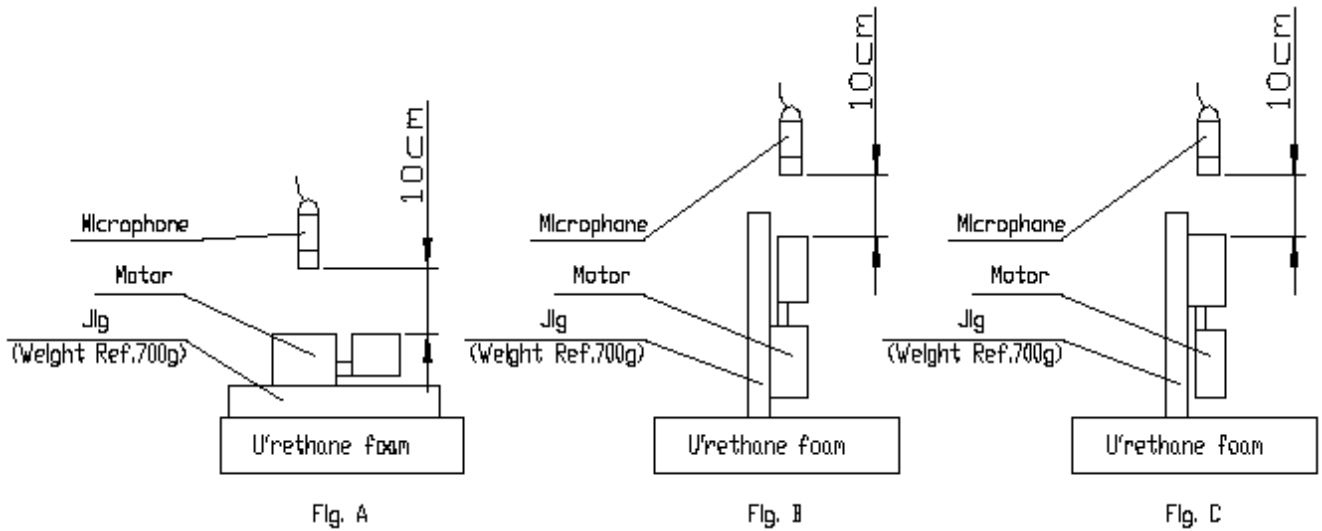
4. Mechanical specifications

Items		Specifications	Condition & Remarks
4-1	Configuration	As specified 10. Outline Drawing	Outline drawing No: Z4TL2B0370649 .
4-2	Appearance	There shall be no evidence of mechanical damage and shall not have inadequate corrosion and so on	Visual examination (allowable extent is based on boundary sample)
4-3	Shaft end play	0.05 mm ~ 0.2 mm	
4-4	Holding strength of vibration weight	49N (5kgf) Min	

5. Performance and characteristics

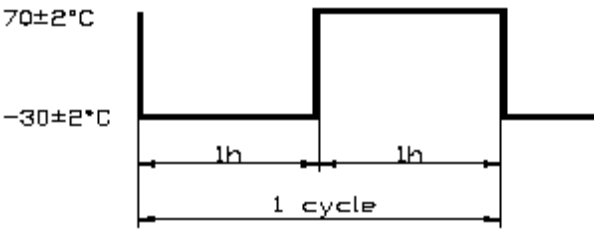
Items		Specifications	Condition & Remarks
5-1	Rated speed	10,000 ± 2,000 rpm	At rated voltage and rated load (vibration weight).
5-2	Rated current	30mA max	
5-3	Stall current	40mA max	At rated voltage.
5-4	Starting voltage	2.4V DC max	At rated load (vibration weight) any position of rotor.
5-5	Insulation resistance	1M• min	At DC 100V between tTerminal and case.
5-6	Terminal resistance	93• approx.	At 20°C.
	Mechanical noise	50db (A) Max	
<p>At rated voltage and rated load (Counterweight). Background noise: 28db (A) max. @ 10cm. Measuring instruments: B & K. The weight of jig: 700g.</p>			

5-7



6. Reliability Test

Items		Standard test conditions					Condition & Remarks	
6-1	Life time						After the test, motors shall be approved as specified in item 7-1.	
		Position	Volt	Load	Temp	Humi		Life
		Horozon	Rated	Weight	20°C	65%		Cycles
6-2	Low temp exposure	Temperature: $-40 \pm 2^{\circ}\text{C}$ Time: 96h					After the test motors shall be approved as specified in item 7-2.	
6-3	High temp exposure	Temperature: $80 \pm 2^{\circ}\text{C}$ Time: 96hrs						

6-4	High humidity exposure test	Temperature: $40 \pm 2^{\circ}\text{C}$ Humidity: 90~95% RH Exposure time: 96hrs No condensation of moisture	
6-5	Vibration test	Frequency: 10~55~10 Hz Displacement: 1.5 mm (p-p) Acceleration: 22m/s^2 Condition: 20/Vibration 20 minutes along x. y. z. direction, under normal package.	After the test motors shall be approved as specified in item 7-2.
6-6	Free fall	Set the motor to the approximately 100g (include the motor) weight of block drop the motor on the concrete floor. Height: 1.5 meters Direction: $\pm x, \pm y, \pm z$ Number of Times: Twice 2 each	After the test motors shall be approved as specified in item 7-2.
6-7	Heat stock test	 <p>Period: 32 cycles</p> <p>Exposed at ordinary temperature and ordinary humidity for 24 hours before measurement.</p>	After 2 hours exposure in ordinary temperature and humidity, Motors shall be approved as specified in item 7-2.

7. Requirements

Items	Requirements
7-1 Table A	1) Rated speed: Initial data -30% min./ Initial data +60% Max 2) Rated current: $\pm 30\%$ Initial data $\pm 30\%$ max 3) Starting voltage: 2.8V DC Max
7-2 Table B	1) Rated speed: $\pm 30\%$ Initial data $\pm 30\%$ max 2) Rated current: $\pm 30\%$ Initial data $\pm 30\%$ max 3) Starting voltage: 2.8 V DC Max

8. Caution and Matters

8-1 (Please lay the motors carefully in transportation to avoid any serious damage to the motor body or its electric function because of collision.)

8-2 (Please use and storage motors according to NO.2 item (Operating Conditions) in specification, or else motor characteristics would be affected.)

8-3 (Make arrangement to limit the storage period to 6 months or less. Condensation of atmosphere must be avoided in motor usage or opening the packaging of the motor.)

8-4 (For proper operation, storage and operating environment must not contain corrosive gases. For example H₂S, SO₂, NO₂, CL₂, etc. In addition storage environment must not have materials that emit corrosive gases especially from silicon, cyanic, formalin and phenol group. In the mechanism or the set, existence of corrosive gases may cause no rotation in motor.)

8-5 (Please don't stall the shaft for a long time after powering, and not to touch the weight when motor is rotating.)

8-6 (There should be no sundries (such as grain, fibre, hair, small tape, glue etc.) in the shaft end play.)

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