



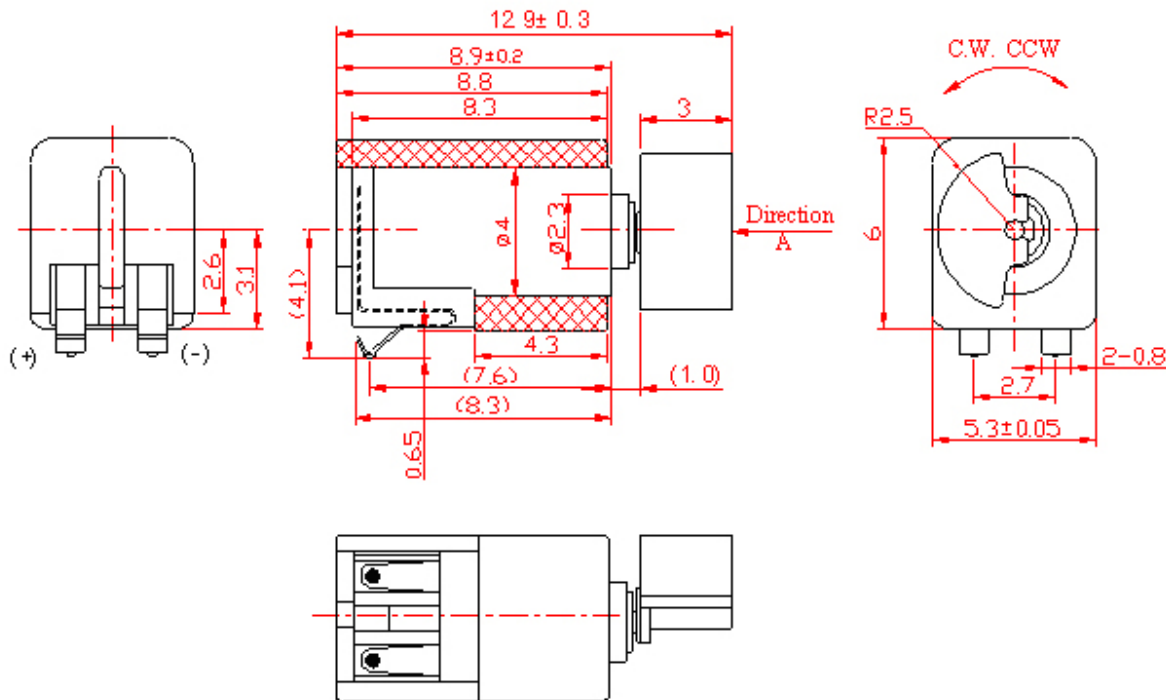
**JinLong Machinery**  
VibratorMotor.com

**KOTL**

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**Part No. Z4TH3B0300022**

( Old Part Number : 4TH3-3002B30 )



## 1. General scope

1-1 The specifications apply to the coreless cylindrical permanent magnetic micro vibration motor

DC model **4TH3-3002B30**.

## 2. Operating conditions

Items	Specifications	Condition & Remarks	
2-1	Rated voltage	3.0V DC	
2-2	Rated load	Counter weight	As specified in the outline drawing.
2-3	Rated speed	10,500 rpm Min	
2-4	Rotation	C.W. (clockwise)	
2-5	Motor position	All positions	
2-6	Operating voltage	2.2~3.6V DC	
2-7	Operating conditions	-20 ~ 60°C, ordinary humidity	No condensation of moisture.
2-8	Storage conditions	-40 ~ 85°C, ordinary humidity	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.

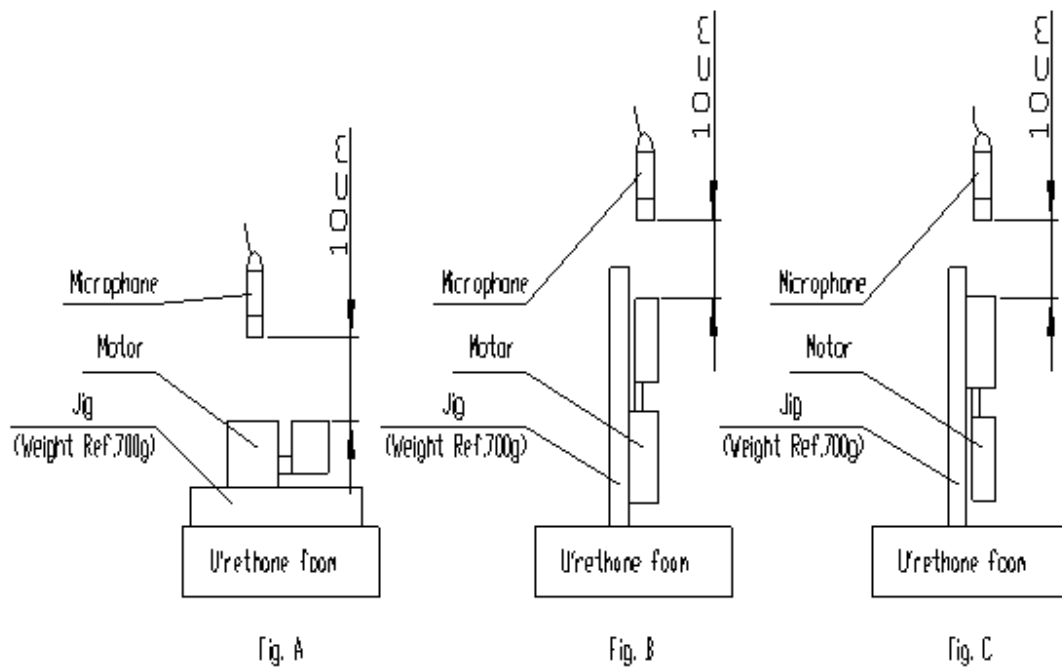
**3-4** All data are based on the measuring conditions: Temperature, 20°C; Humidity, 65% RH. If any disagreement occurs, such test conditions are available: Temperature, 5~35°C; Humidity, 45 ~ 85% RH.

#### 4. Mechanical specifications

Items		Specifications	Condition & Remarks
4-1	Configuration	As specified in outline drawing	Outline drawing No: <b>4TH3-3002B30</b> .
4-2	Appearance	There shall be no evidence of mechanical damage and shall not have inadequate corrosion, etc.	Visual examination: Inspection carried out on samples.
4-3	Shaft end play	0.3 Max	
4-4	Weight of motor	1.0±0.02g approx.	
4-5	Holding strength of vibration weight	49N (5kgf)	

#### 5. Performance and characteristics

Items		Specifications	Condition & Remarks
5-1	Rated speed	10,500rpm	At rated voltage and rated load (vibration weight).
5-2	Rated current	95mA max	
5-3	Stall current	125mA max	At rated voltage.
5-4	Starting voltage	2.0V DC max	At rated load (vibration weight) any position of rotor.
5-5	Insulation resistance	1M• min	At DC 100V between the lead wires and motor body.
5-6	Terminal resistance	30• approx.	At 20°C.
	Mechanical noise	45db (A) max	
<p>Measured at rated voltage and rated load (vibration weight).  Background noise: 28db (A) max. @ 10cm.  Measuring instruments: B &amp; K.  The weight of jig: 700g.</p>			



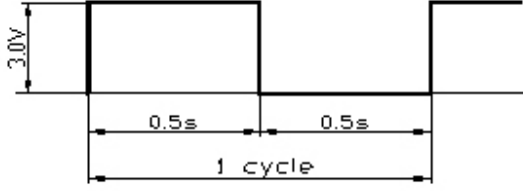
5-7

Fig. A

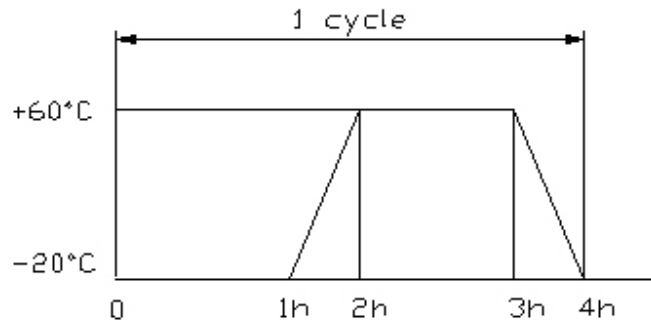
Fig. B

Fig. C

**6. Reliability Test**

Items		Standard test conditions	Condition & Remarks												
6-1	Life test		After 2 hours exposure in ordinary Motors shall be approved as specified in item 7-1.												
		<table border="1"> <thead> <tr> <th>Position</th> <th>Voltage</th> <th>Load</th> <th>Temperature</th> <th>Humidity</th> <th>Life</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Horizontal</td> <td rowspan="2">Rated</td> <td rowspan="2">Counter weight</td> <td>20 °C</td> <td>65 %</td> <td>200,000 cycles</td> </tr> <tr> <td>40 °C</td> <td>90 %</td> <td>40,000 cycles</td> </tr> </tbody> </table>		Position	Voltage	Load	Temperature	Humidity	Life	Horizontal	Rated	Counter weight	20 °C	65 %	200,000 cycles
Position	Voltage	Load	Temperature	Humidity	Life										
Horizontal	Rated	Counter weight	20 °C	65 %	200,000 cycles										
			40 °C	90 %	40,000 cycles										
6-2	Low temperature exposure test	Temperature: $-40 \pm 2^\circ\text{C}$ Time: 96hrs	After the test motors shall be approved as specified in item 7-2.												
6-3	High temperature exposure test	Temperature: $85 \pm 2^\circ\text{C}$ Time: 96hrs													
6-4	High humidity exposure test	Temperature: 40 Humidity: 90% RH Exposure time: 96hrs No condensation of moisture													
6-5	Vibration test	Displacement: 3 mm, 100cpm Period: 30 Mins Direction: x, y, z Time: Every 2 hours	After the test motors shall be approved as specified in item 7-2.												
6-6	Free Fall	Set the motor to the approximately 75g (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 each Shock: $29,420\text{Nm/s}^2$ Equivalent•3,000G•	After the test motors shall be approved as specified in item 7-2.												

6-7 Heat stock



Circulate Condition: 3 V voltage

2s ON, 1s OFF

Time: 2 Times

After the test motors shall be approved as specified in item 7-2.

**7. Post environmental**

Items		Requirements	
7-1	Table A	1) Rated speed:	Initial data -30% min./ +60% max.
		2) Rated current:	Initial data ±30% max
		3) Insulation resistance:	1M• min
		4) Starting voltage:	2.0V DC max
		5) Current waveform:	Normal
7-2	Table B	1) Rated speed:	Initial data -30% min./ +60% max.
		2) Rated current:	Initial data ±30% max
		3) Starting voltage:	2.0V DC max

**8. Matters to be paid attention to when using motor**

8-1 Lay the motors carefully in transportation to avoid any damage to the motor body or its electric function because of collision.

8-2 Storage temperature: 20±10°C. Do not leave the motors in the environment of high temperature, high humidity and gas that will cause rust and corrosion. Do not store the motors for over 6 months.

8-3 Please do not lock the motor shaft when the electric power is supplied.

8-4 Please do not touch the weights when motor is rotating.