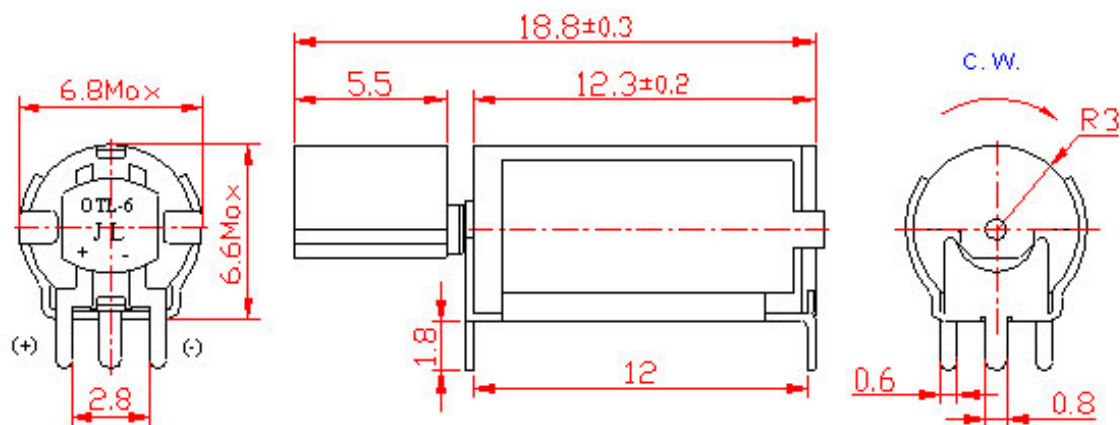




## Part No. **Z6DC1B0730091**



### 1. General scope

1-1 This specification applies to cylindrical permanent magnetic DC vibration motor model **Z6DC1B0730091**.

### 2. Operating conditions

Items	Specifications	Condition & Remarks
2-1	Rated voltage	3.0V DC
2-2	Rated load	Counter weight
2-3	Rotation	C.W. (clockwise)
2-4	Motor position	All positions
2-5	Operating voltage	2.2 ~ 3.6V DC
2-6	Operating conditions	-30 ~ 70°C, ordinary humidity
2-7	Storage conditions	-40 ~ 80°C, ordinary humidity

### 3. Measuring conditions

Items	Specifications	Condition & Remarks
3-1	Temperature	20±2°C
3-2	Humidity	(63 ~ 67%) RH
3-3	Motor position	Shaft horizontal

3-4 All data are based on the measurement under the temperature of 20 °C and humidity 65 %RH. However, the ranges of temperature 5~35 °C and humidity 45~85 %RH are to be applicable as long as no problems.

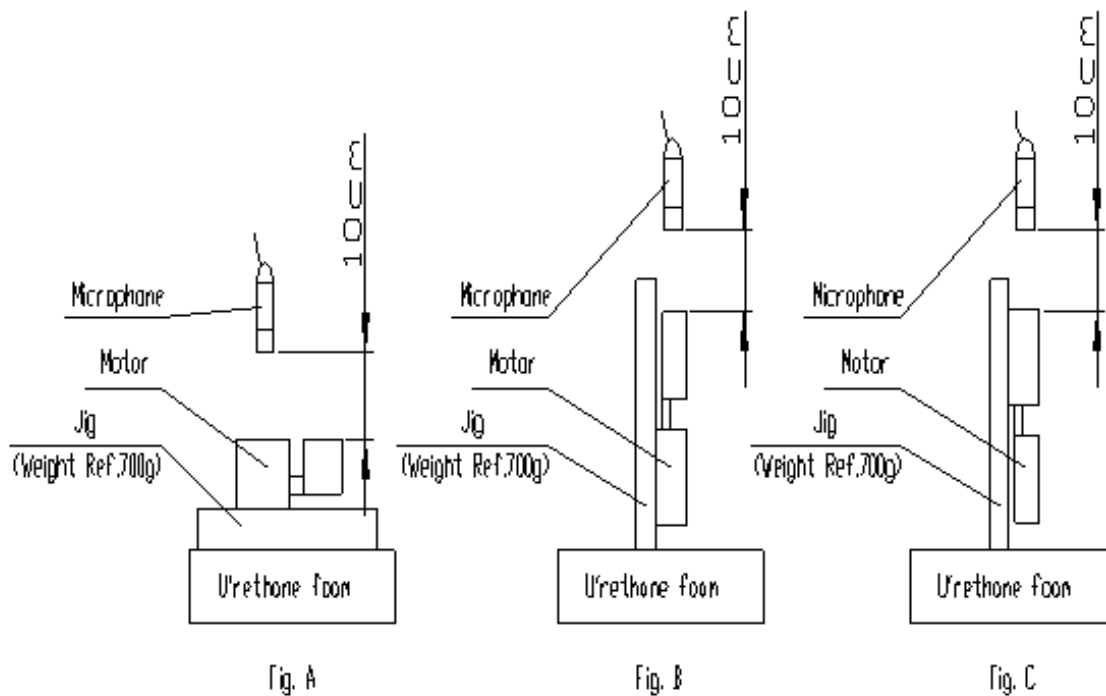
#### 4. Mechanical specifications

Items		Specifications	Condition & Remarks
4-1	Configuration	As specified in outline drawing	Outline drawing No: <b>Z6DC1B0730091</b> .
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	<b>0.1 ~ 0.3mm</b>	
4-4	Holding strength of vibration weight	49N (5kgf) min.	

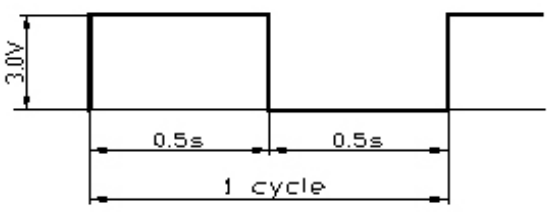
#### 5. Performance and characteristics

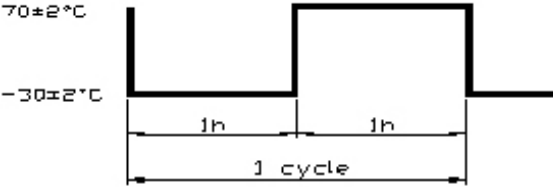
Items		Specifications	Condition & Remarks
5-1	Rated speed	<b>6,500±2,000rpm</b>	At rated voltage and rated load (vibration weight).
5-2	Rated current	<b>90mA max</b>	
5-3	Stall current	<b>125mA max</b>	At rated voltage.
5-4	Starting voltage	<b>1.7V DC max</b>	At rated load (vibration weight) any position of rotor.
5-5	Insulation resistance	1M• min	At DC 100V between the lead wires and motor body.
5-6	Terminal resistance	<b>30• approx. (±20%)</b>	At 20°C.
	Mechanical noise	50db (A) max	
<p>Measured at rated voltage and rated load (counterweight).            Background noise: 28db (A) max. @ 10cm.            Measuring instruments: B &amp; K.            The weight of jig: 700g.</p>			

5-7



**6. Reliability Test**

Items		Standard test conditions	Condition & Remarks												
6-1	Life test	 <table border="1" data-bbox="332 567 1263 661"> <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>Horizontal</td> <td>Rated</td> <td>Counter weight</td> <td>20 °C</td> <td>65 %</td> <td>200,000 cycles</td> </tr> </tbody> </table>	Position	Voltage	Load	Temperature	Humidity	Life	Horizontal	Rated	Counter weight	20 °C	65 %	200,000 cycles	After 2 hours exposure in ordinary Motors shall be approved as specified in item 7-1.
Position	Voltage	Load	Temperature	Humidity	Life										
Horizontal	Rated	Counter weight	20 °C	65 %	200,000 cycles										
6-2	Low Temp.	Temperature: $-40 \pm 2^{\circ}\text{C}$ Time: 96hrs	After 2 hours exposure in ordinary Motors shall be approved as specified in item 7-2.												
6-3	High Temp.	Temperature: $60 \pm 2^{\circ}\text{C}$ Time: 96hrs													
6-4	Humidity exposure	Temperature: $40 \pm 2^{\circ}\text{C}$ Humidity: 80 ~ 95% RH Exposure time: 96hrs No condensation of moisture													
6-5	Vibration	Displacement: 1.5mm (p-p) Frequency: 10 ~ 55Hz Period: 20 Mins log sweep (10 ~ 55 ~ 10Hz) 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	Test state: Set the motor to the approximately 75 g (include the motor) weight of block drop the motor on the concrete floor. Height: 1.5 m Direction: $\pm x, \pm y, \pm z$ Number of times: Twice each	After the test motors shall be approved as specified in item 7-2.												

6-7	Heat shock	<p>Test cycle: 5 cycles</p>  <p>70±2°C -30±2°C 1h 1h 1 cycle</p>	<p>After the test motors shall be approved as specified in item 7-2.</p>
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## 7. Post environmental

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

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

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

**8-2** Please do not leave the motors in the environment of high temperature, high humidity and gas that will cause rust and corrosion. Please don't 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.