Stepper Motor

The High Resolution Type have half the step angle of standard stepper motors. The high resolution type increase motor resolution from 200 steps/revolution to 400 steps/revolution.

SPECIFICATIONS

| Item # PK264M-03B, Stepper Motor |

**Motor Type**
- 2-Phase

**Frame Size**
- 2.22 in

**Motor Length**
- 1.54 in.

**Speed-Torque Characteristics**
- Speed - Torque Characteristics

**Holding Torque**
- Bipolar (Series) 68 oz-in
- Unipolar 55 oz-in

**Shaft/Gear Type**
- Round Shaft (No Gearhead)

**Shaft**
- Double

**Type**
- High-Resolution
<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encoder</td>
<td>None</td>
</tr>
<tr>
<td>Basic Step Angle</td>
<td>0.9°</td>
</tr>
<tr>
<td>Step Angle</td>
<td>0.9 °</td>
</tr>
<tr>
<td>Motor Connection Type</td>
<td>Flying Leads</td>
</tr>
<tr>
<td>Connection Type</td>
<td>Bipolar (Series) Unipolar</td>
</tr>
<tr>
<td>Current per Phase (A/phase)</td>
<td>2.1 [Bipolar (Series)] 3 [Unipolar]</td>
</tr>
<tr>
<td>Lead Wires</td>
<td>6</td>
</tr>
<tr>
<td>Voltage (VDC)</td>
<td>2.6 [Bipolar (Series)] 1.9 [Unipolar]</td>
</tr>
<tr>
<td>Resistance (Ω/phase)</td>
<td>1.26 [Bipolar (Series)] 0.63 [Unipolar]</td>
</tr>
<tr>
<td>Inductance (mH/phase)</td>
<td>3 [Bipolar (Series)] 0.75 [Unipolar]</td>
</tr>
<tr>
<td>Rotor Inertia</td>
<td>0.66 oz-in²</td>
</tr>
<tr>
<td>RoHS Compliant</td>
<td>Yes</td>
</tr>
<tr>
<td>Insulation Resistance</td>
<td>100 M Ω or more when 500 VDC megger is applied between the windings and the case under normal ambient temperature and humidity.</td>
</tr>
<tr>
<td>Dielectric Strength</td>
<td>Sufficient to withstand 1.0 kVAC at 50 Hz or 60 Hz applied between the windings and the case for 1 minute under normal ambient temperature and humidity.</td>
</tr>
<tr>
<td>Temperature Rise</td>
<td>Temperature rise of the windings is 176°F (80°C) or less measured by the change resistance method. (at rated voltage, at standstill, 2 phases energized)</td>
</tr>
<tr>
<td>Insulation Class</td>
<td>Class B [266°F (130°C)]</td>
</tr>
<tr>
<td>Ambient Temperature Range</td>
<td>14 ~ 122°F (-10 ~ 50°C) (non-freezing)</td>
</tr>
<tr>
<td>Ambient Humidity</td>
<td>85% or less (non-condensing)</td>
</tr>
<tr>
<td>Shaft Runout</td>
<td>0.05 mm (0.002 in.) T.I.R.</td>
</tr>
<tr>
<td>Concentricity</td>
<td>0.075 mm (0.003 in.) T.I.R.</td>
</tr>
<tr>
<td>Perpendicularity</td>
<td>0.075 mm (0.003 in.) T.I.R.</td>
</tr>
<tr>
<td>Radial Play</td>
<td>0.025 mm (0.001 in.) maximum of 5 N (1.12 lb.)</td>
</tr>
<tr>
<td>Axial Play</td>
<td>0.075 mm (0.003 in.) maximum of 10 N (2.2 lb.)</td>
</tr>
<tr>
<td>Step Accuracy</td>
<td>±3 arc minutes (±0.05°)</td>
</tr>
</tbody>
</table>
| Permissible Overhung Load | 0 in. from Shaft End = 12.1 lb  
|                          | 0.2 in. from Shaft End = 15 lb  
|                          | 0.39 in. from Shaft End = 20 lb  
|                          | 0.59 in. from Shaft End = 29 lb |

| Permissible Thrust Load | The permissible thrust load shall be no greater than the motor mass. |