Stepper Motor NEMA 17

This document describes mechanical and electrical specifications for PBC Linear stepper motors; including standard, hollow, and extended shaft variations.

- **Phases**: 2
- **Steps/Revolution**: 200
- **Step Accuracy**: ±5%
- **Shaft Load**: 20,000 Hours at 1000 RPM
  - Axial: 25 N (5.6 lbs.) Push
  - Radial: 65 N (15 lbs.) Pull
  - Radial: 29 N (6.5 lbs.) At Flat Center
- **IP Rating**: 40
- **Shaft Load**: RoHS
- **Operating Temp**: -20° C to +40° C
- **Insulation Class**: B, 130° C
- **Insulation Resistance**: 100 MegOhms

**Standard shaft motor shown.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Length</th>
<th>Mounted Rated Current</th>
<th>Mounted Holding Torque</th>
<th>Winding Ohms</th>
<th>Detent Torque</th>
<th>Rotor Inertia</th>
<th>Motor Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Stack)</td>
<td>&quot;L&quot; Max</td>
<td>Amps</td>
<td>Nm Typ.</td>
<td>oz-in</td>
<td>±10% @ 20°C Typ.</td>
<td>mNm oz-in</td>
<td>g cm² oz-in²</td>
</tr>
<tr>
<td>Single</td>
<td>39.8 mm (1.57 in)</td>
<td>2</td>
<td>0.48</td>
<td>68</td>
<td>1.04</td>
<td>2.2</td>
<td>15</td>
</tr>
<tr>
<td>Double</td>
<td>48.3 mm (1.90 in)</td>
<td>2</td>
<td>0.63</td>
<td>89</td>
<td>1.3</td>
<td>2.9</td>
<td>15</td>
</tr>
<tr>
<td>Triple</td>
<td>62.8 mm (2.47 in)</td>
<td>2</td>
<td>0.83</td>
<td>120</td>
<td>1.49</td>
<td>3.8</td>
<td>30</td>
</tr>
</tbody>
</table>

*All standard motors have plug connector. Consult factory for other options.*

**Standard shaft dimensions shown. All other dimensions apply to hollow and extended shaft options.**

**Dimensions: mm (in)**
- 4 Lead Connector, PBC Part#6200490
  (Consult factory for optional motor connectors)

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**PBC Linear**

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NEMA 17 Stepper Motor

*Performance curves apply to continuous duty cycles. Consult factory for intermittent cycles or other voltages.

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**Single Stack**

**Double Stack**

**Triple Stack**

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**Stepper Motor NEMA 23**

This document describes mechanical and electrical specifications for PBC Linear stepper motors; including standard, hollow, and extended shaft variations.

<table>
<thead>
<tr>
<th>Description</th>
<th>Length</th>
<th>Mounted Rated Current</th>
<th>Mounted Holding Torque</th>
<th>Winding Ohms</th>
<th>Detent Torque</th>
<th>Rotor Inertia</th>
<th>Motor Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Stack)</td>
<td>&quot;L&quot; Max</td>
<td>Amps</td>
<td>Nm oz-in</td>
<td>mH</td>
<td>@ 20°C Typ.</td>
<td>mNm oz-in</td>
<td>g cm² oz-in²</td>
</tr>
<tr>
<td>Single</td>
<td>55.0 mm (2.17 in)</td>
<td>2.2</td>
<td>1.50 210</td>
<td>1.6 6.9</td>
<td>45 6.4</td>
<td>220 1.2</td>
<td>0.6 1.3</td>
</tr>
<tr>
<td>Double</td>
<td>77.0 mm (3.03 in)</td>
<td>3</td>
<td>2.30 330</td>
<td>1.1 4.5</td>
<td>75 11</td>
<td>390 2.1</td>
<td>1 2.2</td>
</tr>
<tr>
<td>Power Plus (Triple)</td>
<td>77.0 mm (3.03 in)</td>
<td>3</td>
<td>3.30 470</td>
<td>1.1 3.7</td>
<td>150 21</td>
<td>390 2.1</td>
<td>1.1 2.4</td>
</tr>
</tbody>
</table>

*All standard motors have plug connector. Consult factory for other options.*

Standard shaft motor shown.

Dimensions: mm (in)

Motor with leads: Lead wire is 22 AWG UL3266, 300 ±10 (12 ±.5) long

Standard shaft dimensions shown. All other dimensions apply to hollow and extended shaft options.

Dimensions: mm (in)

4 Lead Connector, PBC Part#6200491 (Consult factory for optional motor connectors)
NEMA 23 Stepper Motor

*Performance curves apply to continuous duty cycles. Consult factory for intermittent cycles or other voltages.

PBC Linear

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