### Gear ratio

<table>
<thead>
<tr>
<th>Gear ratio</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3:1, 10:1</td>
<td>20.0 mm [0.79 in]</td>
</tr>
<tr>
<td>19:1, 30:1</td>
<td>21.5 mm [0.87 in]</td>
</tr>
<tr>
<td>50:1, 70:1</td>
<td>24.0 mm [0.94 in]</td>
</tr>
<tr>
<td>100:1, 131:1, 150:1</td>
<td>26.5 mm [1.04 in]</td>
</tr>
</tbody>
</table>

1. Threaded to a depth of 3.0 mm [0.12 in]; exceeding this depth can damage gears in the gearbox.
2. To get the specified scale, select 100% in print settings.

---

**Name:**
37D mm Metal Gearmotors (without encoder)

**Item number:**
2829, 4681-4689, 4741-4748

**Drawing date:**
10 January 2020

**Units:**
mm [in]

**Material:**
Mixed

**Dev code:**
—

[https://www.pololu.com/category/116/37d-mm-gearmotors](https://www.pololu.com/category/116/37d-mm-gearmotors)

© 2019 Pololu Corporation
<table>
<thead>
<tr>
<th>Gear ratio</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3:1, 10:1</td>
<td>20.0 mm [0.79 in]</td>
</tr>
<tr>
<td>19:1, 30:1</td>
<td>21.5 mm [0.87 in]</td>
</tr>
<tr>
<td>50:1, 70:1</td>
<td>24.0 mm [0.94 in]</td>
</tr>
<tr>
<td>100:1, 131:1, 150:1</td>
<td>26.5 mm [1.04 in]</td>
</tr>
</tbody>
</table>

1. Threaded to a depth of 3.0 mm [0.12 in]; exceeding this depth can damage gears in the gearbox.

2. Leads are approximately 200 mm [8 in] long and are terminated by a 1×6 female header with a 2.54 mm [0.1 in] pitch.

3. To get the specified scale, select 100% in print settings.

https://www.pololu.com/category/116/37d-mm-gearmotors

Name: 
37D mm Metal Gearmotors with 64 CPR Encoder

Item number: 2828, 4691-4699, 4751-4758

Drawing date: 10 January 2020
Dev code: —
Units: mm [in] Material: Mixed

© 2019 Pololu Corporation
1. Threaded to a depth of 3.5 mm [0.14 in]; exceeding this depth can damage the motor.

2. Leads are approximately 200 mm [8 in] long and are terminated by a 1×6 female header with a 2.54 mm [0.1 in] pitch.

3. To get the specified scale, select 100% in print settings.

https://www.pololu.com/category/116/37d-mm-gearmotors

Name: Motor with 64 CPR Encoder for 37D mm Metal Gearmotors (No Gearbox, Helical Pinion)

Item number: 4750, 4690

Units: mm [in] Material: Mixed

© 2019 Pololu Corporation