



Servo: D12-MG

DATA SHEET

12g Metal Gear Digital Servo

Features:

Metal geared, more durable and accurate.

The same high quality motors as leading brands, can continually run at high speed for 50 hours.

Highly accurate and fast digital driven IC.

Specifications:

Operating voltage range: 4.5v to 6.0v

Operating temp range: 20C to 60C

Operating speed: **see to the right >>>**

Torque: 1.8kg/cm@6v
1.6kg/cm@4.8v

Running current range: 50-180mA

Idle current: 5mA

Dead bandwidth: <3usec

Weight: 12g

Gear/bearing material: Metal

Speed Test:

1. We remove the stop block in the servo so it can rotate 360 degrees.

2. We count how many times the servo arm can rotate in 60 sec.

3. Now we know time for one full rotation we divide by 6 for speed rotating 60 degrees.

Counting the D12-MG it rotates 360 degrees 120 times in 60 seconds (at 6V), so if:

$$\text{Speed} = ((1/N)/60)/6 = 1/N/10 = 10/N$$

N=number of rotations in 60 secs

Then $\text{Speed} = 10/N$

So the D12-MG's speed is:

$$10/120 = \mathbf{0.083\text{sec}/60\text{ degrees}} \text{ at } 6V$$

Speed at 4.8V is 0.1sec/60 degrees

Torque:

Torque = Force x Distance, please see our videos on YouTube.

*See these tests being performed on our YouTube page:

www.youtube.com/helivol

