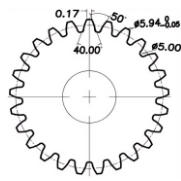
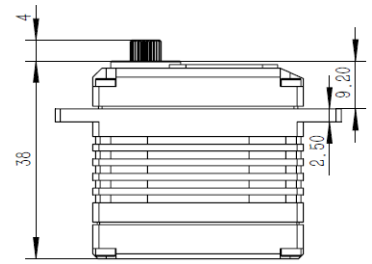
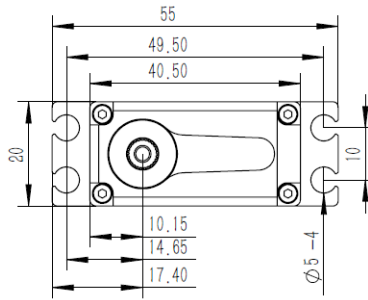


# X20-3012 Technical Specification



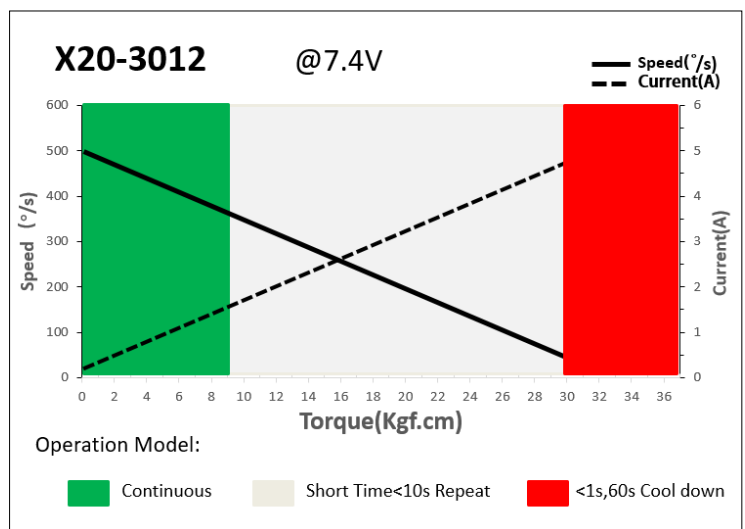
25T-6mm  
Output Shaft Spline



## 1. Operating Data

|                      |                    |
|----------------------|--------------------|
| Rated Voltage        | DC7.4V             |
| Voltage Range        | DC6.0V-8.4V        |
| Torque               | 25Kgf.cm@6.0V      |
|                      | 30Kgf.cm@7.4V      |
|                      | 35Kgf.cm@8.4V      |
| Speed                | 0.15sec/60°@6.0V   |
|                      | 0.12sec/60°@7.4V   |
|                      | 0.11sec/60°@8.4V   |
| Working Frequency    | 1520us/333Hz       |
| Default Travel Angle | ± 50°=100°Total    |
| Temperature Range    | -20℃.....+65℃      |
| Case Material        | Aluminum Alloy     |
| Motor Type           | Brushless DC Motor |
| Gear Set Material    | Hardened Steel     |
| Position Sensor      | Potentiometer      |
| Ball Bearing         | 2 BB               |
| Case Dimensions      | 40.5*20*38mm±0.2mm |
| Weight               | 72g±10%            |

## 2. Performance



## 3. Command signal

### 3.1. PWM Command Interface

|                            |   |
|----------------------------|---|
| Signal Voltage             | TTL-level:<br>HIGH: min.3.3V, max.5.0V<br>Low: min.0.0V, max.1.5V |
| Pulse Lengths              | 900us-2100us  |
| Pulse Lengths for Position | 1000us/1500us/2000us<br>-50° 0°+50°                               |

## 4. Electrical Connection

| Pin Assignment (PWM) |   |        |          |                              |
|----------------------|---|--------|----------|------------------------------|
|                      | 1 | Yellow | SIG      | Command Signal               |
|                      | 2 | Red    | DC+      | Supply Voltage               |
|                      | 3 | Brown  | DC-(GND) | Supply Ground, Signal Ground |