

### 1. 使用環境條件

Apply Environmental Condition :

| No. | 項目 item                             | 規格 standard  |
|-----|-------------------------------------|--------------|
| 1-1 | 保存溫度<br>Storage Temperature Range   | -20°C ~ 60°C |
| 1-2 | 操作溫度<br>Operating Temperature Range | -10°C ~ 50°C |
| 1-3 | 操作電壓<br>Operating Voltage Range     | 6.0V~7.4V    |

### 2. 測試環境

Standard Test Environment :

|     |                                   |   |
|-----|-----------------------------------|---|
| 2-1 | 測試環境<br>Standard Test Environment | <p>每一个检查必须是正常的温度和湿度进行测量，温度 <math>25 \pm 5^{\circ}\text{C}</math>，相对湿度 <math>65 \pm 10\%</math>，在按照本规范的标准测试条件下判断特征。</p> <p>Every characteristic of the inspect must be normal temperature and humidity carry out the test , temperature <math>25 \pm 5^{\circ}\text{C}</math> and relative humidity <math>65 \pm 10\%</math> of judgment made in accordance with this specification standard testing conditions.</p> |
|-----|-----------------------------------|---|

### 3. 外觀檢查

Appearance Inspection :

| No. | 項目 item                 | 規格 standard  |
|-----|-------------------------|--|
| 3-1 | 外觀尺寸<br>Outline Drawing | 尺寸见附件<br>Dimension see the attachment                    |
| 3-2 | 外觀<br>Appearance        | 无损坏，不允许影响功能<br>No damage which affects functions allowed |

#### 4. 電氣特性

Electrical Specification (Function of the Performance) :

| No. | 項目 item   | 6.0V         | 7.4V         |
|-----|---|--------------|--------------|
| 4-1 | 空載轉速<br>Operating speed (at no load)                    | 0.18 sec/60° | 0.16 sec/60° |
| 4-2 | 空載電流(低速到快速)<br>Running current at no load(Slow to Fast) | 80~100 mA    | 100~120 mA   |
| 4-3 | 停止扭力<br>Stall torque (at locked)                        | 24.0 kg-cm   | 30.0 kg-cm   |
| 4-4 | 停止電流<br>Stall current (at locked)                       | 3100 mA      | 3800 mA      |
| 4-5 | 待機電流<br>Idle current (at stopped)                       | 4 mA         | 5 mA         |

注：項目 4-2 定义平均值时，伺服器无负荷运行

Note: Item 4-2 definition is average value when the servo running with no load

#### 5. 機械特性

Mechanical Specification :

| No. | 項目 item                       | 規格 standard                                   |
|-----|-------------------------------|---|
| 5-1 | 外觀尺寸<br>Overall Dimensions    | 见附件<br>See the drawing                        |
| 5-2 | 機構極限角度<br>Limit angle         | 180° ± 10°                                    |
| 5-3 | 重量<br>Weight                  | 70 ± 1g                                       |
| 5-4 | 導線規格<br>Connector wire gauge  | # 28 AWG 0.08*60                              |
| 5-5 | 導線長度<br>Connector wire length | 250 ± 5 mm                                    |
| 5-6 | 舵片規格<br>Horn gear spline      | ψ5.8*25T                                      |
| 5-7 | 舵片種類<br>Horn type             | 单边型、一字型<br>single side shape and linear shape |
| 5-8 | 減速比<br>Reduction ratio        | 1/402   |
| 5-9 | 齒輪材質<br>Materials of the gear | 鋁鍍鈦/鋼齒輪<br>Titanium Shielded 7075 Alu & Steel |



Product Name  
數碼伺服器 Digital Servo

Model No.  
R30

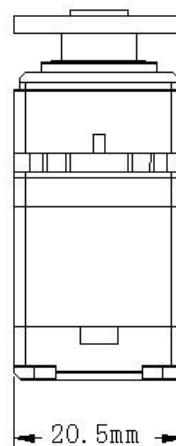
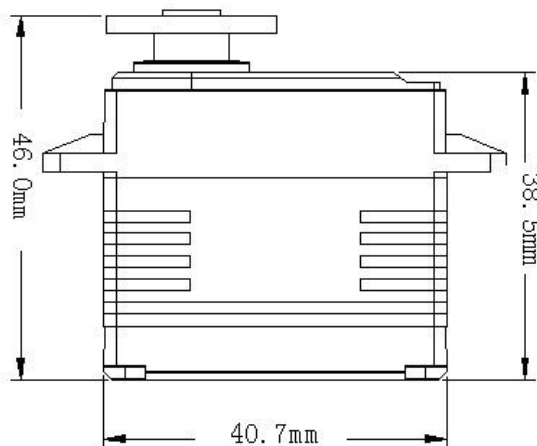
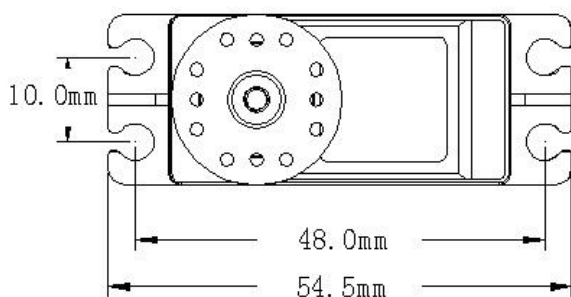
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## 6. 控制特性

Control Specification :

| No. | 項目                          | 規格   |
|-----|-----------------------------|--|
| 6-1 | 控制系統<br>Control system      | 脈波寬度調變<br>Pulse Width Modification   |
| 6-2 | 放大器種類<br>Amplifier type     | 333Hz 數字控制器<br>333Hz Digital Controller                                    |
| 6-3 | 操作角度<br>Operating travel    | 90° (在 1500→2000 $\mu$ sec)  |
| 6-4 | 中立位置<br>Neutral position    | 1500 $\mu$ sec   |
| 6-5 | 脈波訊號虛位<br>Dead band width   | 2 $\mu$ sec  |
| 6-6 | 旋轉方向<br>Rotating direction  | 逆時針 (在 1500→2000 $\mu$ sec)<br>Counterclockwise (when 1500→2000 $\mu$ sec) |
| 6-7 | 脈波寬度範圍<br>Pulse width range | 800→2200 $\mu$ sec   |
| 6-8 | 可作動角度範圍<br>Maximum travel   | 大約 165° (在 800→2200 $\mu$ sec)<br>Approx 165° (when 800→2200 $\mu$ sec)    |



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