# Shenzhen XQPOWER Technology Co., LTD

XQ-POWER

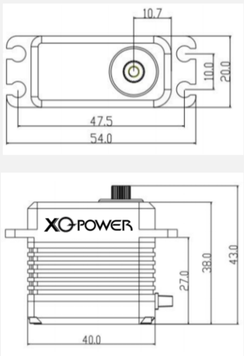
Product Inspection Specification

| DOCUMENT NO | N/D.2024.10.17 |
|---|---|
| VER | X81_8120.12 |
| Page. | P.1 |
| Prepare Date | 202401010 |

| GSN | XQ-8H | Product Name | XQ-POWER 12V20kg-cm Hight Voltage Brushless Tail Servo | Model | XQ-RS8120H | Material | CNC all-metal case |
|---|---|---|---|---|---|---|---|

## Process flow

SIZE OF THE DRAWINGS

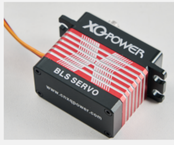



## The Drawings

Photos1




Photos2




## CNC / industry testing torque

### Control Specifications

| NO. | Standard Test Environment | |
|---|---|---|
| 1-1 | Temperature range | 25℃±5℃ |
| 1-2 | Humidity range | 65%±10% |
| NO. | **Apply Environmental Condition** | |
| 2-1 | Storage Temperature Range | -20℃ ~ 70℃ |
| 2-2 | Operating Temperature Range | -15℃ ~ 65℃ |
| NO. | **Mechanical Specification** | |
| 3-1 | Servo Dimensions | 20*40*38 mm |
| 3-2 | Servo Weight | 78g |
| 3-3 | Servo Gear | Stainless Steel |
| 3-4 | Angle of limit | 210° |
| 3-5 | Servo Bearing | 2 Ball bearings |
| 3-6 | Output force shaft | 25T-φ5.96mm |
| 3-7 | Servo arm | Plastic, POM |
| 3-8 | Case Material | Aluminium CNC |
| 3-9 | Servo line | 300mm 22AWG |
| 3-10 | Built-in motor | Brushless motor |
| 3-11 | Splash water resistance | Yes |
| | **Electrical Specification** | |
| NO. | **Test Operating Voltage Range** | |
| 4-1 | Work Voltage | **7.4 V** |
| 4-2 | No load speed | 0.05 sec/60° |
| 4-3 | Runnig current (no load) | 320 mA |
| 4-4 | Peak stall torque | 12.5 kg.cm |
| 4-5 | Stall current | 2.8 A |
| | Work Voltage | **8.4 V** |
| 4-6 | No load speed | 0.044 sec/60° |
| 4-7 | Runnig current (no load) | 370 mA |
| 4-8 | Peak stall torque | 15 kg.cm |
| 4-9 | Stall current | 3.5 A |
| | Work Voltage | **12 V** |
| 4-10 | No load speed | 0.03 sec/60° |
| 4-11 | Runnig current (no load) | 440 mA |
| 4-12 | Peak stall torque | 20 kg.cm |
| 4-13 | Stall current | 4.0 A |

AQL

| Make table | CHECK | APPROVE |
|---|---|---|
| MR.ZHONG | MR.LIU | Manager.ZHOU |


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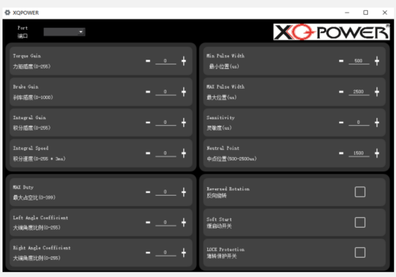

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|---|---|---|---|---|---|---|---|


## Control Specification

### Test display diagram

Photos1




### Accessories

Photos1



Reference opinions of all departments: Agree

### EMPHASIS

| NO. | Item | Specification |
|---|---|---|
| 5-1 | Command signal | RS485 |
| 5-2 | Amplifier type | Digital Controller |
| 5-3 | Pulse width range | 510～1010 μsec |
| 5-4 | Neutral position | 760 μsec |
| 5-5 | Running degree | 360° (when1000～2000 μsec) Customization |
| 5-6 | Dead band width | 1 μsec |
| 5-7 | Rotating direction | CCW(when 510～1010 μsec) |

### Appearance inspection

| NO. | QC details |
|---|---|
| 5-7 | Material qualified |
| 5-8 | Gear structure qualified |
| 5-9 | Function qualified |
| 5-10 | Use data qualified |
| 5-11 | Pass the test |

AQL

| NO. | Other |
|---|---|
| 6-1 | |
| 6-2 | |
| 6-3 | |
| 6-4 | |

### Other Accessories

| | |
|---|---|
| 7-1 | Plastic arm bag |
| 7-2 | Screw |
| 7-3 | Metal arm (additional purchase) |





| Make table | CHECK | APPROVE |
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