

9imod DS35MG-270

9imod 35KG Waterproof High Torque Digital Servo (DS35MG-270) Instruction Manual

1. PRODUCT OVERVIEW

The 9imod 35KG Waterproof High Torque Digital Servo (Model: DS35MG-270) is a high-performance steering servo designed for various remote control applications, including 1/8, 1/10, and 1/12 scale RC cars, robots, and DIY models. It features a robust metal gear construction, a coreless motor for quick response, and an IP67 waterproof rating, ensuring reliable operation in challenging environments.

- **Compact Size:** Dimensions of 40 x 20 x 40.5 mm (1.57 x 0.78 x 1.57 inches) and a weight of 80g (2.7oz).
- **Includes 25T Metal Servo Horn:** Comes with a 25T metal servo arm for direct installation.

Full High-Precision Steel Gear with Better Accuracy and Longer Service Life



Image 2.1: Internal view highlighting the full high-precision steel gears for durability.

3. SETUP AND INSTALLATION

Proper installation is crucial for optimal servo performance. Follow these general guidelines:

1. **Mounting:** Securely mount the servo to your RC vehicle or robot chassis using the provided screws and mounting brackets. Ensure there is no excessive play or movement.
2. **Servo Horn Attachment:** Attach the appropriate servo horn (25T metal servo horn included) to the servo output shaft. Ensure it is aligned correctly with your steering linkage or robotic arm.
3. **Wiring:** Connect the servo's three-wire cable (typically brown/black for ground, red for positive voltage, and orange/yellow for signal) to the corresponding channels on your receiver or flight controller. This servo uses a Futaba/JR connector.
4. **Power Supply:** Ensure your power supply (e.g., BEC or battery) provides the recommended voltage of 7.4V for optimal performance. The servo supports a voltage range up to 8.4V.

5. **Calibration:** After installation, calibrate the servo with your remote control system to set the neutral position and end-points. Refer to your RC system's manual for specific calibration procedures.

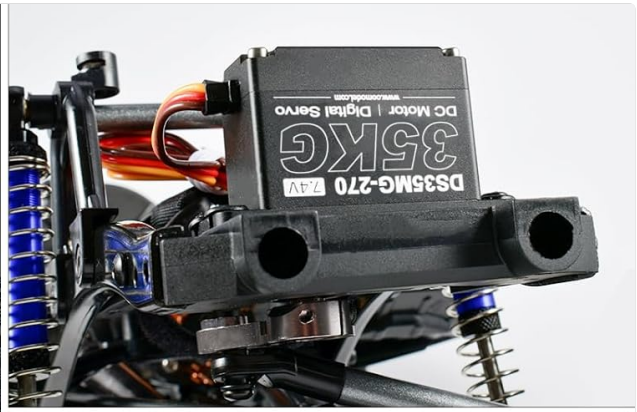


Image 3.1: Exploded view showing internal components, waterproof seals, and Futaba/JR connector.

3.1 Compatibility

This servo is compatible with a wide range of RC vehicles, including:

- Traxxas TRX4/4x4 Slash
- Axial Capra 1/10
- HPI Savage Xs Flux
- Other 1/8, 1/10, and 1/12 scale RC crawler short course trucks.



Power Servo BY 9IMOD

Be Compatible with Traxxas TRX4/4x4 slash,Axial Capra 1/10,HPI Savage Xs flux and other 1/10 RC Crawler Short Course Truck



Image 3.2: The 9iMod servo installed in an RC crawler, demonstrating its fit and application.

4. OPERATING INSTRUCTIONS

Once installed and calibrated, the 9iMod 35KG Digital Servo provides precise and powerful control. Its coreless design ensures rapid response to commands, making it suitable for applications requiring quick and accurate movements.

4.1 Basic Operation

- The servo receives pulse width modulation (PWM) signals from your receiver to determine its position.
- Moving the control stick on your transmitter will send signals to the servo, causing it to rotate to the commanded angle.
- The 270-degree rotation capability allows for a wide range of motion, ideal for steering and other articulated movements.



Image 4.1: Diagram showing PWM signal interpretation for 180 and 270-degree control.

4.2 Operational Videos

Video 4.1: Demonstration of the 9imod High Torque Steering Servo in a 1/10 RC Crawler during an upgrade process.

Video 4.2: Showcase of the Waterproof High Torque RC Servo Motor's capabilities for robotic DIY and RC car applications.

Video 4.3: A brief overview of the 9imod 35kg RC servo motor in action.

Video 4.4: Demonstration of the 1/10 RC Steering Servo's high torque and waterproof features.

5. MAINTENANCE

To ensure the longevity and optimal performance of your 9imod 35KG Digital Servo, follow these maintenance guidelines:

- **Regular Cleaning:** Periodically clean the exterior of the servo to remove dirt, dust, and debris. Use a soft, dry cloth.
- **Waterproof Integrity:** While the servo is IP67 rated, avoid prolonged submersion in water or exposure to harsh chemicals. After operating in wet conditions, allow the servo to dry thoroughly.
- **Gear Inspection:** Occasionally inspect the metal gears for any signs of wear or damage. If excessive wear is observed, consider replacing the gears to maintain precision.
- **Connection Check:** Ensure all electrical connections (servo to receiver/controller, power supply) are secure and free from corrosion.
- **Avoid Overloading:** Do not exceed the servo's specified torque limits, as this can lead to premature wear or damage to the motor and gears.
- **Heat Management:** The aluminum casing provides efficient heat dissipation. Ensure adequate airflow around the servo, especially during intense operation, to prevent overheating.

Video 5.1: A waterproof test of the 9imod servo motors, demonstrating their resilience to water exposure.

Waterproof Performance IP67 Adapt to harsh environments



All Metal Body, High Precision, Good Sealing, No Dripping

Image 5.1: The 9imod servo undergoing a waterproof test, highlighting its IP67 rating.

6. TROUBLESHOOTING

If you encounter issues with your 9imod 35KG Digital Servo, consider the following troubleshooting steps:

- **Servo Not Responding:**

- Check all wiring connections to ensure they are secure and correctly plugged into the receiver/controller and power source.
- Verify that the receiver/controller is powered on and functioning correctly.
- Ensure the power supply (BEC/battery) is providing sufficient voltage and current.

- **Erratic Movement or Glitching:**

- Check for radio interference. Try operating the servo in a different location or away from other electronic devices.
- Inspect the servo horn and linkage for any obstructions or binding that might impede smooth movement.

- Ensure the servo is securely mounted and not vibrating excessively.
- **Limited Rotation Angle (e.g., not 270 degrees):**
 - Verify your remote control system's end-point adjustments (EPA) or travel settings are correctly configured for the servo's full range of motion.
 - Some controllers may require specific signal configurations to achieve the full 270-degree rotation. Consult your controller's manual.
- **Weak or Slow Response:**
 - Confirm that the servo is receiving the recommended voltage (7.4V). Lower voltage can reduce torque and speed.
 - Check for any mechanical binding in the linkage that could be putting excessive load on the servo.
 - Ensure the servo is not overheating. Allow it to cool down if it feels excessively warm.

7. SPECIFICATIONS

Feature	Specification
Brand	9imod
Model	DS35MG-270
Stall Torque (6.0V)	30kg-cm
Stall Torque (7.4V)	35kg-cm
Stall Torque (8.4V)	38kg-cm
Speed (6.0V)	0.14 sec/60°
Speed (7.4V)	0.13 sec/60°
Speed (8.4V)	0.11 sec/60°
Operating Travel	270° ± 1°
Dead Band	2 µSec
Neutral/Refresh Rate	1500µs
Motor Type	DC Motor (Coreless)
Gear Material	Strength Steel
Case Material	AL6061T6 (Aluminum Alloy)
Bearing	Double Ball Bearings
Waterproof Rating	IP67
Operating Temperature	-20°C ~ +60°C
Pulse Width	500 to 2500 µSec
Size	40 x 20 x 40.5 mm (1.57 x 0.78 x 1.57 inches)

Feature	Specification
Net Weight	80g (2.7oz)
Horn Gear Spline	25T- ϕ 5.92mm

GEAR MATERIAL	CASE MATERIAL
Strength Steel	AL6061T6
HORN GEAR SPLINE	BEARING
25T- ϕ 5.92mm	Double Ball Bearings
DEAD BAND	NEUTRAL/ REFRESH RATE
2 μ Sec	1500 μ S
OPERATION TEMPERATURE	OPERATION TRAVEL
-20C°~ +60C°	60° \pm 1
PULSE WIDTH	MOTOR TYPE
500 to 2500 μ Sec	DC Motor
SIZE	NET WEIGHT
40*20*40.5mm	78g(2.75oz)
STALL TORQUE	
30kg-cm@6.0V	
35kg-cm@7.4V	
38kg-cm@8.4V	

35KG WATERPROOF SERVO SPECIFICATION



25T METAL HORN



INCLUDED

Image 7.1: Detailed specifications of the Gimod 35KG Waterproof Digital Servo.

Product Dimension

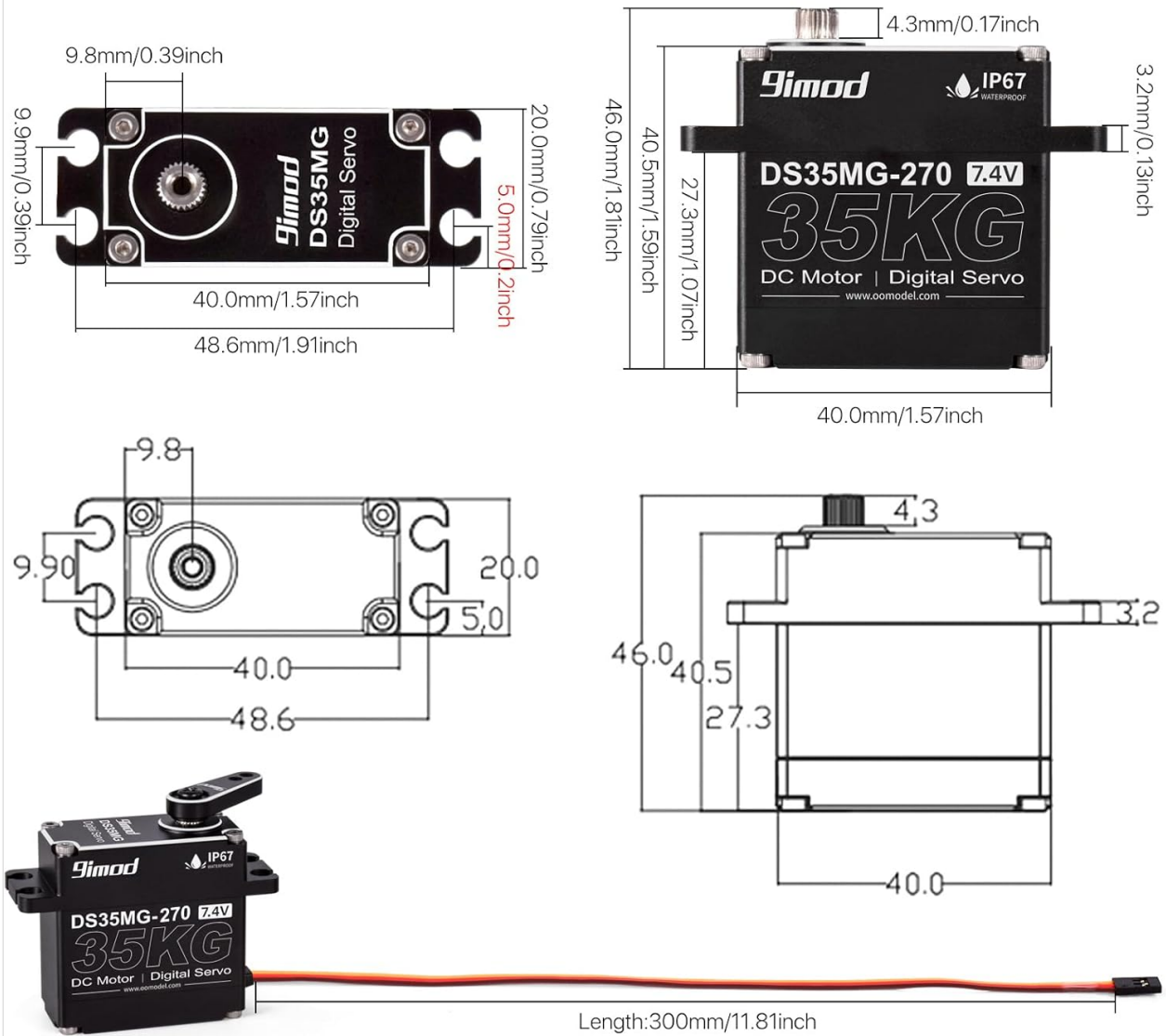


Image 7.2: Dimensional drawing providing precise measurements of the servo.

8. WHAT'S IN THE BOX

The product package includes the following items:

- 1 x 9imod 35KG Waterproof High Torque Digital Servo (DS35MG-270)
- 1 x 25T Metal Servo Horn
- Assorted mounting screws and accessories



Image 8.1: The 9imod 35KG Digital Servo and its accompanying accessories.

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official 9imod website or contact their customer service directly. Keep your purchase receipt as proof of purchase for any warranty claims.

For additional resources and product information, you may visit the [9imod Store on Amazon](#).