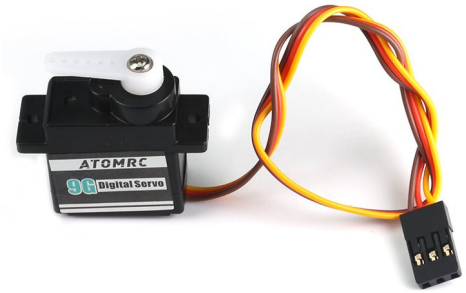
AtomRC S09P

9 g digital servo with plastic gears
User manual



Read this manual carefully before use and keep it for future reference.

www.rotorama.com

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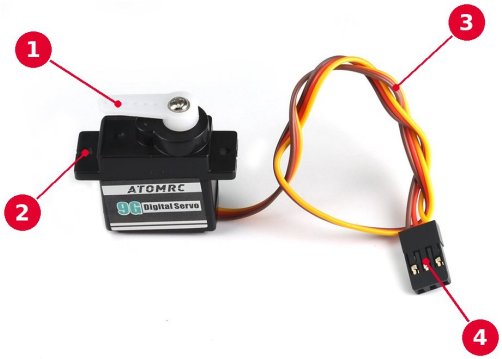
1. Product description

1.1 Purpose

AtomRC S09P is a small digital servo in the 9 g weight class with **plastic gears**. The servo converts the control signal from the receiver or flight controller (FC) into rotation of the output shaft and, via a servo arm and pushrod, moves the control surfaces of the model – ailerons, elevator, rudder or other mechanisms.

The manufacturer AtomRC supplies it as a spare servo for its aircraft models, but the servo can be used universally in RC models designed for a 5 V supply and lighter loads. Plastic gears are lighter than metal ones, but they are more sensitive to impacts and overload (e.g. a control surface hitting the ground on landing).



① servo arm ② mounting tab ③ servo cable ④ connector

1.2 Specifications and package contents

Product designation	AtomRC S09P
Type	9 g digital servo, plastic gears
Dimensions	32 × 12 × 27.3 mm
Weight	9 g
Supply voltage	5 V
Torque	1.5 kg·cm
Speed	≤ 0.12 s / 60°
Operating angle	180°
Cable length	300 mm
Connector	3-pin, DuPont type

Package contents	1× servo, 1× set of servo arms

Not included in the package: servo sticker (the servo is supplied without it, so its appearance may differ from the photos), receiver, flight controller (FC), power supply (BEC), pushrods or control horns.

2. Use

2.1 Connection

The servo is connected with the 3-pin connector ④ to a servo output of the receiver or flight controller (FC). The cable has three wires – brown, red and orange. According to the usual servo colour code, **brown is negative (GND), red is positive (+5 V) and orange is the signal**. Before connecting, check the pin layout on the receiver or FC and plug the connector in with the correct orientation.

- The servo supply voltage is **5 V**. Power the servo from a 5 V BEC output of the receiver, electronic speed controller (ESC) or FC. Never connect it directly to the flight battery and do not use a BEC set to a higher voltage.
- Make sure the BEC can handle the current draw of all connected servos at the same time – an overloaded BEC can cause a receiver brownout and loss of control of the model.
- Pull the connector out by its housing, not by the wires.

2.2 Centring and fitting the servo arm

1. Connect the servo to the receiver or FC and switch on the transmitter and the model. The servo moves to the position corresponding to the signal – with the channel at neutral, this is the centre.
2. Only in the centred position, fit an arm ① from the set of servo arms so that it is as close to perpendicular to the servo body as possible, and secure it with the screw in the centre of the shaft.
3. Mount the servo in the model using the mounting tabs ② or in the prepared pocket according to the model's instructions. The servo must be seated firmly, without play.
4. Connect the control surface pushrod and check that the control surface moves freely over the full range and does not bind anywhere.

※ Do not turn the servo arm forcibly by hand – this may damage the plastic gears.

2.3 Setting the travel

Set the end points of the servo in the transmitter or flight controller (FC) so that neither the control surface nor the pushrod hits a mechanical stop at the end positions. A stalled servo can be recognised by buzzing and heating up; continuous load against a stop overloads the servo and shortens its service life. Reverse the direction of movement with the *Reverse* function in the transmitter or FC.

2.4 Safety and maintenance

- Before every flight, check that all control surfaces move in the correct direction and over the full range, that the arm is firmly screwed on and that the pushrods have no play.
- After a crash or hard landing, check the servo's operation – damaged gears show up as jerky movement, play or unusual noise. Replace a damaged servo.
- Protect the servo from moisture, dust, sand and high temperatures.
- Do not modify or disassemble the servo.
- When operating the model in which the servo is installed, observe the regulations applicable at the place of operation. **The law of the country in which you operate the model is decisive.**

▶ Troubleshooting

Problem	Possible cause and solution
Servo does not respond	Check the connector orientation, the 5 V supply and the output assignment in the transmitter or FC.
Servo buzzes and heats up	The control surface hits a stop – reduce the travel or adjust the pushrod.
Servo moves the wrong way	Reverse the direction with the *Reverse* function in the transmitter or FC.
Arm slips, servo jerks	Damaged gears – replace the servo.

3. Information for the EU and Czech Market

3.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.com

3.2 Disposal of electrical equipment



- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu.

4. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 3.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.