



KOKO 1404 4600KV

Skystars brushless motor
User manual · package of 2



Read the entire manual before installation. Always remove the propellers whenever a battery is connected.

www.rotorama.com

Contents

1. Product description

1.1 What it is for

1.2 Specifications and package contents

2. Use

2.1 Safety instructions

2.2 Mounting on the frame

2.3 Connecting to the speed controller (ESC)

2.4 Checking the direction of rotation

2.5 Fitting the propeller

2.6 Maintenance and troubleshooting

3. Information for the EU and Czech Market

3.1 Importer and responsible person in the EU

3.2 Disposal of electrical equipment

4. Warranty and rights arising from defective performance

1. Product description

1.1 What it is for

Skystars KOKO 1404 4600KV is a brushless electric motor in size 1404 for lightweight FPV quadcopters. It is intended primarily for 3" quadcopters powered by a 3S to 4S battery. The package contains **two motors** – a quadcopter with four motors needs two packages.

The motor is screwed onto the frame arm, its three wires are soldered to the electronic speed controller (ESC) and the propeller is fitted onto the $\varnothing$ 1.5 mm shaft. The motor itself has no controls – its speed is controlled by the ESC according to commands from the flight controller (FC), which processes the inputs from the radio transmitter.



Skystars KOKO 1404 4600KV – the package contains two motors

1.2 Specifications and package contents

Product designation	Skystars KOKO 1404 4600KV
Motor size	1404
KV	4600
Battery	3S–4S
Intended use	primarily 3" quadcopters
Shaft diameter	1.5 mm
Configuration	9N12P
Weight	9 g (one motor)
Lead wires	24AWG, length 120 mm
Mounting holes	9 mm spacing, M2 thread
Package contents	2× motor, 2× screw set
Not included	propellers, speed controller (ESC), flight controller (FC), frame, battery



Motor parts

- ① $\varnothing$ 1.5 mm shaft on the motor bell (rotor) - the propeller is fitted here
- ② Motor base with M2 mounting holes at 9 mm spacing
- ③ 24AWG lead wires (three phase wires to the ESC)
- ④ Type designation on the motor bell (1404 KV4600)

2. Use

2.1 Safety instructions

- The motor spins the propeller at very high speed. **Always remove the propellers whenever a battery is connected** – during installation, soldering, configuration and testing.
- Before connecting the battery, make sure the quadcopter is disarmed (Disarm – motors off) and that nobody is within reach of the propellers.
- The motor heats up during operation. Do not touch the bell after a flight until it has cooled down.
- Do not put fingers or objects into the openings in the bell. The rotor contains strong magnets that attract metal filings and small screws.
- Do not use the motor with a damaged shaft, a cracked bell or damaged wire insulation.
- This product is not a toy. Keep it out of the reach of children – small parts (screws) could be swallowed.

2.2 Mounting on the frame

- ① Place the motor on the frame arm so that the holes in the base (9 mm spacing) line up with the holes in the arm. Route the wires along the arm towards the centre of the frame.
- ② Fasten the motor with the M2 screws from the set. **The screw must not be too long** – if it protrudes into the motor, it will damage the windings and destroy the motor. After tightening, turn the bell by hand: it must rotate easily without rubbing.
- ③ Tighten the screws gently; the M2 thread in the base strips easily. We recommend a drop of medium-strength thread locker.
- ④ Secure the wires to the arm (with a cable tie or heat-shrink tubing) so that they cannot get into the propeller.

2.3 Connecting to the speed controller (ESC)

- Use an ESC rated for the voltage of the battery you will fly with (3S or 4S).
- Shorten the wires to the required length, strip and tin the ends and solder them to the motor pads on the ESC. The order of the three wires does not matter – it only determines the direction of rotation (Chapter 2.4).
- Solder cleanly and quickly to avoid overheating the ESC. The joints must not touch neighbouring pads or the frame – a short circuit can destroy both the ESC and the motor.

2.4 Checking the direction of rotation

- ① Remove the propellers and connect the quadcopter to a computer (e.g. the Betaflight configurator, *Motors* tab).
- ② Briefly spin up each motor in turn and compare its direction of rotation with the diagram for your motor layout and the *Motor direction* setting of the flight controller.
- ③ If a motor spins the wrong way, change its direction in the ESC configurator or swap any two of the three motor wires.

2.5 Fitting the propeller

- Use a propeller with a hole for a **1.5 mm** shaft, suitable for the quadcopter the motor is intended for (primarily 3").
- Attach the propeller according to its manufacturer's instructions and check that it is firmly seated and runs true.
- Fit each motor with a propeller of the correct direction (CW / CCW) according to the set direction of rotation.
- Fit the propellers only after checking the direction of rotation and always with the battery disconnected.

2.6 Maintenance and troubleshooting

- After every impact, check that the shaft is not bent, that the bell does not rub and that the motor turns freely and smoothly.
- Remove grass, sand and metal debris from the motor. Do not use water or solvents for cleaning.
- Regularly check that the motor and propeller screws are tight and that the wire insulation is intact.

Problem	Possible cause and solution
Motor spins the wrong way	Change the direction in the ESC configurator or swap two motor wires (Chapter 2.4).
Motor rubs, rattles or vibrates	Bent shaft, debris in the motor, damaged propeller or a screw that is too long. Clean the motor, check the propeller and screws; replace any damaged part.
Motor only twitches and does not spin up	Cold or broken solder joint on one of the wires, damaged winding. Check the soldering; replace the motor if the winding is damaged.
Motor is excessively hot after a flight	Propeller too large or damaged, mechanical resistance, unsuitable settings. Use a propeller suitable for a 3" quadcopter and check that the motor turns freely.

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@rotorاما.cz
Phone	+420 252 252 098
Website	www.rotorاما.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.