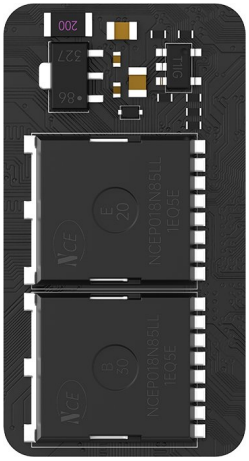
Anti-Spark Filter 30x16

iFlight Anti-spark filter 30*16
User manual



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

www.rotorama.com

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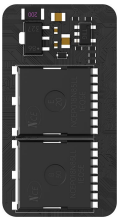
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1. Product description

1.1 Purpose

When a battery is connected to a drone, a very high current initially rushes into the capacitors of the electronic speed controller (ESC). This causes an audible spark at the connector that gradually burns the contacts – their contact resistance increases and their service life is shortened. The effect is most pronounced on drones powered by 6S batteries.

The Anti-Spark Filter 30x16 is connected between the XT60 power connector and the ESC. Its protective circuit limits the inrush current when the battery is connected, so no spark occurs, and according to the manufacturer it also protects the electronics from rapid voltage and current spikes. The module is fitted with a pair of power MOSFETs and is intended for larger, more powerful drones – the manufacturer lists it as compatible with 7", 9" and 10" frames: Chimera7 Pro V2 / Chimera7 ECO, Chimera9 ECO, XL10 V6 / CX10 ECO and SH CineLR 7.



Anti-Spark Filter 30x16

1.2 Specifications and package contents

Parameter	Value
Product designation	iFlight Anti-spark filter 30*16
Input voltage	4S–6S (14–26 V)
Output voltage	4S–6S (14–26 V)
Continuous current	150 A
Peak current	160 A
Dimensions	30 × 16 mm
Weight	4.5 g

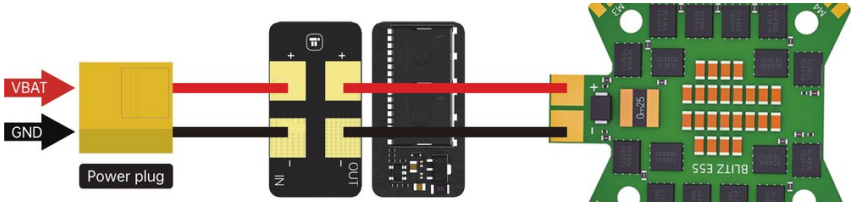
Package contents: 1× anti-spark module 30 × 16 mm, 1× XT60 power connector (XT60EW-M) with cables, 2× heat-shrink tubing.

Not included: battery, electronic speed controller (ESC), drone or frame, solder and soldering tools.

2. Wiring and use

2.1 Wiring diagram

The module has two pairs of solder pads. The **IN** side (input) is connected to the XT60 power connector, the **OUT** side (output) to the power pads of the ESC. Each side has a **+** pad for the positive pole (VBAT, red wire) and a **−** pad for the negative pole (GND, black wire).



Wiring according to the manufacturer: XT60 connector (Power plug) → IN → OUT → ESC (shown: iFlight BLITZ E55 4IN1). The other side of the module is shown next to the pads.

- **VBAT** – battery positive (red wire), **+** pad
- **GND** – battery negative (black wire), **−** pad
- **IN** – module input, connected to the XT60 connector
- **OUT** – module output, connected to the **+** and **−** pads of the ESC

2.2 Installation

Installation requires experience with soldering power wires. Always work with the **battery disconnected**.

① Desolder the original power lead with the XT60 connector from the ESC, or use the cables and XT60 connector supplied in the package.

② Solder the cables from the XT60 connector to the module input side **IN**: red wire to the **+** pad, black wire to the **−** pad.

③ Connect the module output side **OUT** to the power pads of the ESC: **+** to **+**, **−** to **−**.

④ Keep the capacitor on the ESC power input connected – the anti-spark filter does not replace it.

⑤ Insulate the finished joints and the whole module with heat-shrink tubing so that they cannot touch the carbon frame or other conductive parts.

⑥ Secure the module in the frame so that it cannot move freely and the cables are not under tension or rubbing against the frame edges.

※ Never swap the IN and OUT sides or the + / − polarity. Incorrect wiring can destroy both the module and the ESC. Such damage is not a product defect.

2.3 First battery connection and operation

- Before connecting a battery for the first time, use a multimeter to check that there is no short circuit between the positive and negative poles of the XT60 connector.
- If possible, connect the battery for the first time through a short-circuit protector (smoke stopper) or use a current-limited bench power supply.
- Use only batteries within the module's input voltage range, i.e. 4S to 6S Li-Po. A fully charged 6S Li-Po has 25.2 V (4.20 V/cell).
- A fully charged 6S LiHV battery has 26.1 V (4.35 V/cell), which is above the 26 V upper limit stated by the manufacturer. Therefore do not use the module with 6S LiHV batteries.
- The drone's current draw must not continuously exceed 150 A; the short-term peak according to the manufacturer is 160 A.
- After the first few flights, check that the module and joints do not overheat and that the insulation is intact.

3. Safety and troubleshooting

3.1 Safety instructions

- The product is intended for installation in FPV drones and models. Installation and soldering should be carried out by a person experienced with model electronics.
- Always keep the battery disconnected while soldering and installing. Work on a non-flammable surface in a well-ventilated area.
- Do not exceed the stated input voltage or currents. Overloading may cause the module to overheat and be damaged.
- The module must not come into contact with water, moisture or conductive debris. Do not use a damaged or deformed module.
- After a crash, always inspect the module, joints and insulation before reconnecting the battery.
- Charge and store Li-Po batteries according to their manufacturer's instructions. Always disconnect the battery after flying.
- Keep the product out of the reach of children.
- The operation of the drone in which the module is installed is governed by the law of the country in which you operate the drone.

3.2 Troubleshooting

Problem	Possible cause and solution
The drone does not power on after connecting the battery	IN and OUT swapped, wrong polarity or a cold solder joint. Disconnect the battery, check the wiring according to chapter 2.1 and resolder faulty joints.
A spark still occurs when connecting the battery	The module is wired incorrectly or bypassed (e.g. the ESC is powered directly from the connector). Check the wiring according to chapter 2.1.
The module gets excessively hot	The drone's current draw exceeds the stated values or the joints are poor. Check the joints and the drone setup.
Visibly damaged module or insulation	Stop using the module and contact the retailer.

4. Information for the EU and Czech Market

4.1 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

4.2 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.

5. 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 4.1.
- 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.