Amass MT60

Three-pole high-current connector (1 pair)
User manual



Read this manual before soldering and before connecting to power for the first time.

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Contents

1. Product description

1.1 What it is for

1.2 Technical data and package contents

2. Use

2.1 Safety

2.2 Male or female?

2.3 Soldering the wires

2.4 Connecting, maintenance and inspection

3. Information for the EU and Czech Market

3.1 Importer and responsible person in the EU

3.2 Disposal

4. Warranty and rights arising from defective performance

1. Product description

1.1 What it is for

Amass MT60 is a three-pole high-current connector – a three-pin counterpart of the classic XT60 connector. On larger and more powerful FPV drones and models it is mainly used for a detachable connection between **motors and electronic speed controllers (ESC)**, so that a motor or an ESC can be replaced without soldering directly on the board.

The package contains one pair – a male (**MT60-M**) and a female (**MT60-F**) – and a plastic cover for each part, which covers and insulates the solder joints and protects the wires where they leave the connector. The contacts are made of gold-plated brass, the housing of self-extinguishing polyamide.



MT60 connector with its cover, which is slid over the solder joints after soldering.

1.2 Technical data and package contents

Data according to the manufacturer's data sheet (Changzhou Amass Electronics Co., Ltd.). **Not included in the package:** wires, heat-shrink tubing, solder, soldering iron or other tools.

Product designation	**MT60-M** (male), **MT60-F** (female)
Rated current	30 A
Maximum current	60 A
Voltage	DC 500 V
Contact resistance	0.45 mΩ
Contacts	brass, gold-plated
Housing	polyamide (PA), flammability UL94 V-0
Recommended wire	12 AWG
Operating temperature	−20 °C to 120 °C
Service life	1000 mating cycles
Length	MT60-M 27.5 mm; MT60-F 26.7 mm
Colour	yellow
Package contents	1× MT60-M (male), 1× MT60-F (female), 2× cover

2. Use

2.1 Safety

- **Do not solder or mount the connector while a battery** or any other power source is connected. A Li-Po battery short-circuited through the wires or contacts can catch fire.
- The continuous current must not exceed the **rated current of 30 A**. The 60 A value is the maximum current stated by the manufacturer, not a continuous load.
- Use wires of a suitable cross-section (the manufacturer recommends 12 AWG). A wire that is too thin heats up under load.
- When soldering, work in a well-ventilated area, protect your eyes and do not touch the contacts until they have cooled down.
- Do not connect or disconnect the connector under load – always only after Disarm (motors switched off) and after disconnecting the battery.
- Keep the product out of the reach of children – small parts can be swallowed.

2.2 Male or female?

The female (MT60-F) has its contacts recessed in the connector housing, the male (MT60-M) has protruding pins. In its data sheet the manufacturer specifies the female for the battery side and the male for the side of the powered device.

- General rule: fit the **female** on the side from which the voltage is supplied – its recessed contacts cannot accidentally touch a conductive object and cause a short circuit.
- Use the **same layout** throughout the model (e.g. on all motors) so that parts are interchangeable and nothing gets connected wrongly.
- The **+** and **−** symbols on the connector housing help with orientation when wiring power. For a motor the order of the phases does not matter – the opposite direction of rotation is set by swapping any two wires or in the ESC settings.

2.3 Soldering the wires

① **Slide the cover** onto the wires before soldering – it will not be possible afterwards.

② Strip the wire ends to a length matching the depth of the solder cups and tin the wires.

③ **Plug the mating connector in.** This keeps the contacts in the correct position while hot and prevents the softened plastic from deforming.

④ Fix the connector (vice, “helping hands” holder), fill the solder cup with solder, insert the wire and let the joint cool down without moving it.

⑤ Solder the remaining contacts the same way; let the connector cool down between joints. The joint should be smooth and shiny, and solder must not bridge the contacts.

⑥ Slide the cover over the solder joints up to the connector housing.

⑦ Before connecting power for the first time, check (ideally with a multimeter) that there is no short circuit between the contacts.

※ Heating one contact for too long softens the plastic housing and the contact may shift. Solder quickly, using a sufficiently powerful soldering iron.

2.4 Connecting, maintenance and inspection

- Push the connectors together straight, all the way in. Disconnect them by pulling the connector housing, never the wires.
- Regularly check the connector for play, a cracked housing, blackened or deformed contacts and wires coming loose from the solder joints.
- Replace a connector that sits loosely when mated, heats up or shows signs of overheating.
- Do not use the connector outside the operating temperature range of −20 °C to 120 °C.
- Keep the contacts clean and dry; remove dirt with a dry brush.

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

The information in this chapter describes the situation in the Czech Republic. **The law of the country in which the product is used is decisive** – if you use or dispose of it in another country, follow the regulations of that country.

- The connector itself is a passive component without electronics (metal and plastic). Take an unused or replaced connector to a collection yard or dispose of it in sorted waste according to your local rules.
- If the connector is soldered to electrical equipment (motor, ESC, drone), dispose of it **together with that equipment as electrical waste** – electrical equipment must not be disposed of with mixed municipal waste. Take-back is free of charge for the end user.

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.