MINERVA DYNAMICS

Product Datasheet

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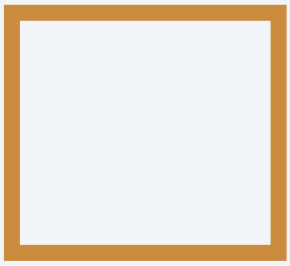
Qu-Dyn-04

Qu-Dyn Series · Air-Core Square Magnetorquer

Overview

The Qu-Dyn-04 is an air-core square magnetorquer providing a nominal dipole moment of 0,4 Am² at 5 V for CubeSat attitude control: detumbling, momentum dumping and fine attitude adjustments.

With no ferromagnetic core it has no residual magnetic moment and a perfectly linear response, and its flat 95 × 90 × 14 mm form factor integrates easily on panels and structures.



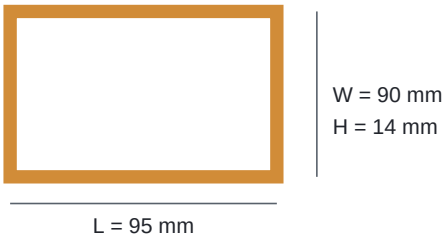
Air-core square coil

0,4 Am²	0,54 W	70 g
Dipole moment	Power at 5 V	Mass

Specifications

PERFORMANCE	
Magnetic dipole moment (nominal)	**0,4 Am²**
Magnetic gain	**3,73 Am²/A**
Dipole linear voltage range	**0 – 5 V**
Core	**Air core (no remanence)**
ELECTRICAL	
Nominal input voltage	**5 V**
DC resistance (20 °C)	**46,6 Ohm**
Current at nominal voltage	**107 mA**
Power consumption (typical)	**0,54 W**
MECHANICAL	
Envelope (L × W × H)	**95 × 90 × 14 mm**
Mass	**70 g**
Envelope shape	**Cuboid**

Outline (not to scale)



Features

- Air-core design: no residual dipole, no saturation, fully linear response.
- Flat square form factor for panel or structure mounting.
- Compatible with standard 5 V CubeSat power buses; PWM-driveable.
- Customized versions: we can manufacture in different geometries and power consumptions for your needs.
- Delivery within 1 month. TRL 6.

Values are nominal at 20 °C. Specifications are subject to change without notice. Customized versions available on request.