Tor-Dyn 12-8

Tor-Dyn Series · Rod Magnetorquer

Overview

The Tor-Dyn 12-8 is a compact ferromagnetic-core rod magnetorquer providing a nominal dipole moment of 1,2 Am² at 5 V, sized for CubeSat attitude control: detumbling, momentum dumping and fine attitude adjustments in low Earth orbit.

A precision-wound copper coil gives a linear dipole response across the 0–5 V range at only 0,59 W, for straightforward integration with standard CubeSat power systems.

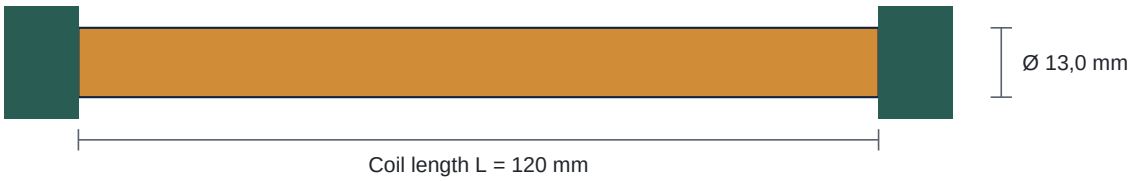


1,2 Am²	0,59 W	102 g
Dipole moment	Power at 5 V	Mass

Specifications

PERFORMANCE	
Magnetic dipole moment (nominal)	**1,2 Am²**
Magnetic gain	**10,1 Am²/A**
Dipole linear voltage range	**0 – 5 V**
ELECTRICAL	
Nominal input voltage	**5 V**
DC resistance (20 °C)	**42,3 Ohm**
Current at nominal voltage	**118 mA**
Power consumption (typical)	**0,59 W**
Coil layers	**8**
MECHANICAL	
Rod length	**120 mm**
Diameter	**13,0 mm**
Mass	**102 g**
Envelope shape	**Cylinder**

Outline (not to scale)



Features

- Linear, repeatable dipole response with low power draw.
- Compact rod geometry for 1U–6U CubeSat ADCS layouts.
- 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.