MINERVA DYNAMICS

Product Datasheet

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# TORDYN-80-26

Tor-Dyn Series · High-Dipole Rod Magnetorquer

## Overview

The TORDYN-80-26 is a Hiperco 50A-core rod magnetorquer delivering a nominal dipole moment of 8,0 Am² at 12 V for CubeSat and small-satellite attitude control: detumbling, momentum dumping and fine pointing in low Earth orbit.

Its precision-wound 26-layer copper coil keeps power consumption at 0,23 W while staying well below core saturation, giving a linear, repeatable dipole response across the 0–12 V drive range.




**8,0 Am²**
Dipole moment

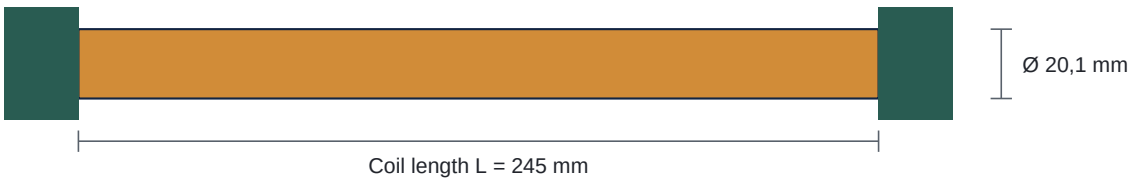
**0,23 W**
Power at 12 V

**432 g**
Mass

## Specifications

| | |
|---|---|
| **PERFORMANCE** | |
| Magnetic dipole moment (nominal) | **8,0 Am²** |
| Magnetic gain | **421,5 Am²/A** |
| Dipole linear voltage range | **0 – 12 V** |
| Core material | **Hiperco 50A (Fe-Co-V)** |
| **ELECTRICAL** | |
| Nominal input voltage | **12 V** |
| DC resistance (20 °C) | **630,8 Ohm** |
| Current at nominal voltage | **19 mA** |
| Power consumption (typical) | **0,23 W** |
| Coil layers | **26** |
| **MECHANICAL** | |
| Rod length | **245 mm** |
| Outer diameter | **20,1 mm** |
| Mass | **432 g** |
| Envelope shape | **Cylinder** |

### Outline (not to scale)




### Features

- High dipole moment with low power draw and linear response.
- Hiperco 50A core for a large saturation margin; even-layer winding with both leads at one end.
- Compatible with standard small-satellite 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.