



DRAGONFLY  
a e r o s p a c e



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# RW-1Nms

High-precision reaction wheel for imaging satellites.



ITAR-Free



TRL 9



## Key Specifications

Angular Momentum

Torque

Control Modes

Control Rate (Speed, Torque)

Speed Range

Control Accuracy – Imaging Mode

- Speed Control
- Torque Control

Interface

Supply Voltage

Power @ 0.1 Nms

Peak Power

Operating Temperature

Dimensions

Mass

Unbalance

- Static
- Coupled

Vibration

Radiation

Reliability

Features

1.0 Nms @28.5 V

$\pm 39$  mNm ( $\pm 74$  mNm)\*

Current, Speed & Torque

10 Hz

$\pm 10\,000$  RPM

Steady-state speed error  $< 0.5$  RPM

Steady-state momentum error  $< 5.09 \times 10^{-5}$  Nms

CAN / RS485

12–36 V

$\sim 1.2$  W

108 W

$-20$  °C to  $+70$  °C

102.8 x 100 x 50 mm\*

1.0 kg

$< 2$  g.mm<sup>2</sup> ( $< 0.5$  g.mm<sup>2</sup>)\*

$< 50$  g.mm<sup>2</sup> ( $< 15$  g.mm<sup>2</sup>)\*

14.14 g RMS (GEVS)

$> 20$  kRad at component level

ABEC 7 bearings for long service life

Over temperature and current protection

Latch-up protection

Regenerative braking

Control timing knowledge  $< 1$  ms

\* Version 2

## ABOUT DRAGONFLY AEROSPACE

Dragonfly Aerospace is an industry leader in world-class, high-performance imaging satellites and payloads. Our turnkey solutions for imaging satellites get these strategic assets operational on orbit within minimum time, cost and risk.

All features, functionality and other product specifications are subject to change without notice or obligation.

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