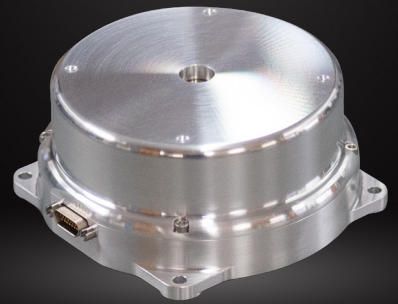


REACTION WHEEL

400 mNms RW-0.4 Data Sheet

Version 1, 14 July 2021



MOMENTUM	Nominal: 0.2 Nms (light rotor) or 0.4 Nms (heavy rotor)
TORQUE	±100 mNm at nominal momentum Enhanced motor cooling for high duty cycle (CMG replacement)
CONTROL MODE	Speed or torque with built-in control CPU
COMMAND / TELEMETRY	Redundant RS-485
MECHANICAL	Dimensions: 46mm high x Ø103 mm (not including mounting feet) Mass: 600g (0.2 Nms) or 770 g (0.4 Nms)
SUPPLY VOLTAGE	Nominal: 24 V to 34 V, +75 V options available
SUPPLY POWER (28 V IN VACUUM)	TBD. Regenerative braking returns power to bus.
ENVIRONMENT	Thermal: -40°C to +70°C (operating) Vibration: >14 gRMS
RADIATION	> 60 krad Total Dose, with LDRS testing Heavy ion tested to 50 MeV cm ² /mg Hardware TMR on all flip flops, EDAC on all RAM
RELIABILITY	Diamond coated hybrid ball bearings Redundant motor windings Active neutralization of rotor static charge
HERITAGE	Mechanical design from 1Nms wheel, with 85 Units on orbit. First Flight Deliveries Q2 2021.
PRICE	US\$45,000 each (0.2 Nms), US\$50,000 each (0.4 Nms)