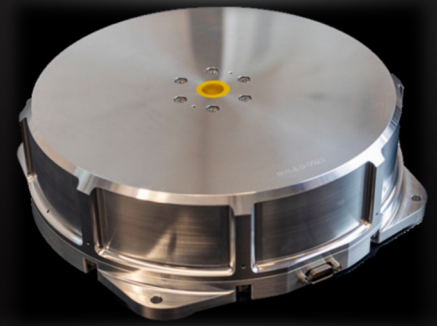


REACTION WHEEL

RW4-5.0 Data Sheet

Version 1.1– 2024-12-20



MOMENTUM	Nominal: ± 5.0 Nms
TORQUE	± 150 mNm (see below torque-box)
CONTROL MODE	Speed or torque
COMMAND/TELEMETRY	Redundant RS-485
MECHANICAL	Dimensions: 194 mm x 192 mm x 57.25 mm Mass: 3.0 kg max
IMBALANCE (average)	Static: <3 g·mm Dynamic: <200 g·mm ²
SUPPLY VOLTAGE	24 V to 34 V (nominal 28V)
SUPPLY POWER (28 V IN VACUUM)	29 W @ 5.0 Nms, steady state 65 W @ 5.0 Nms, +75 mNm torque 108 W peak @ 4.4 Nms, +150 mNm torque
ENVIRONMENT	Thermal: -30° C to $+85^{\circ}$ C (operating) Random Vibration: 14 gRMS Radiation: 50 kRad TID (bare board), Up to 50 MeV·cm ² /mg on most active parts Shock: TBD
HERITAGE	Mechanical design inherited from 0.06/0.2/0.4/1.0 Nms models, with reinforcement for heavy rotors inherited from the 12 Nms model Rad-tolerant electronics design inherited from 0.2/0.4/1.0/12 Nms models

