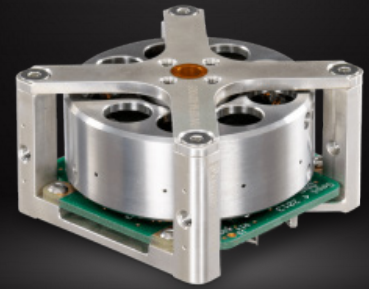


REACTION WHEEL

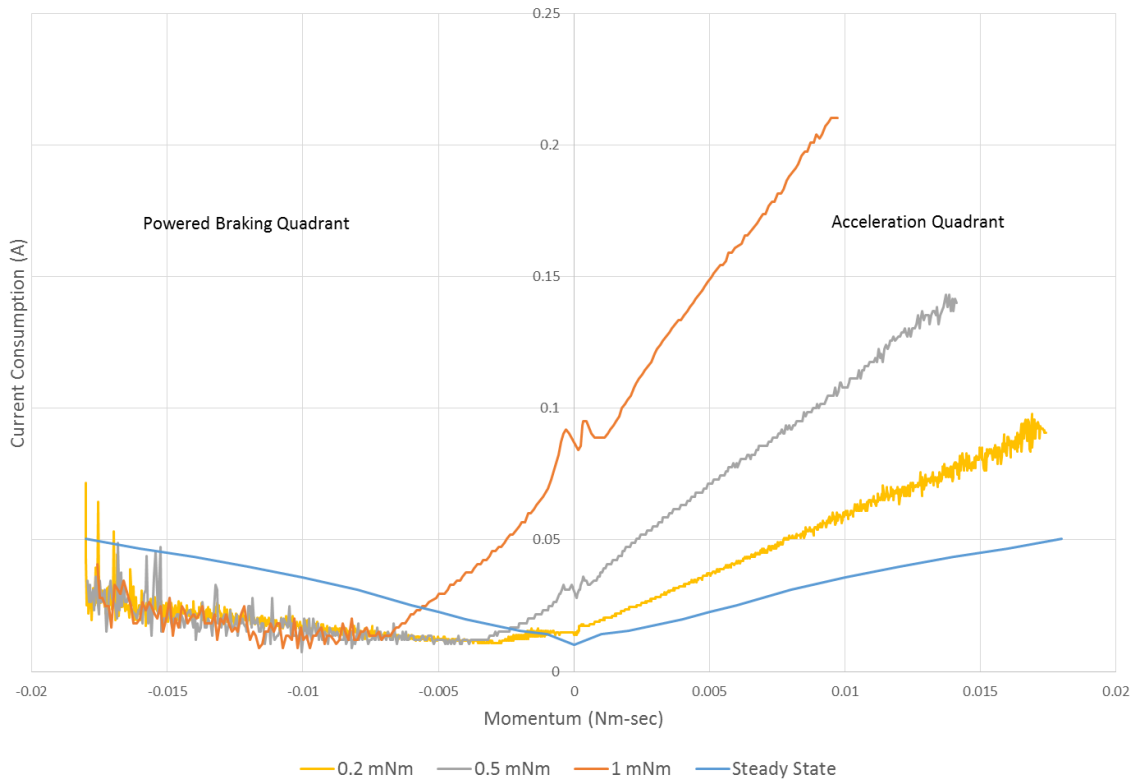
10 mNms RW-0.01 Data Sheet

Version 1, 14 July 2021



| | |
|--|---|
| MOMENTUM | Nominal: 0.01 Nms Peak: 0.018 Nms (at 5 V supply) |
| TORQUE | ±1 mNm at 0.01 Nms (at 5 V supply) |
| CONTROL MODE | Speed or torque with built-in control CPU |
| COMMAND / TELEMETRY | UART or I ² C/SMBus |
| MECHANICAL | Dimensions: 50 mm x 50 mm x 30 mm Mass: 120 g |
| SUPPLY VOLTAGE | Nominal: 3.4 V to 6.0 V Maximum: 8 V |
| SUPPLY POWER (28 V IN VACUUM) | 1.05 W @ 0.01 Nms, + 1 mNm 0.25 W @ 0.018 Nms, steady state 0.11 W @ 0.005 Nms, steady state |
| ENVIRONMENT | Thermal: -40°C to +70°C (operating) Vibration: >12 gRMS Radiation: >20 krad dose |
| RELIABILITY | Diamond coated hybrid ball bearings Redundant motor windings Radiation lot-screened parts (optional) |
| HERITAGE | 10 Units total on-orbit on 4 satellites, first launched June 2014 Common design to RW-0.03, with >10 year on-orbit |
| PRICE | US\$20,000 each, +US\$2000 for radiation lot-screened parts |

Input Current at 5 V in Vacuum for Various Torques



Torque Box at 5 V in Vacuum

