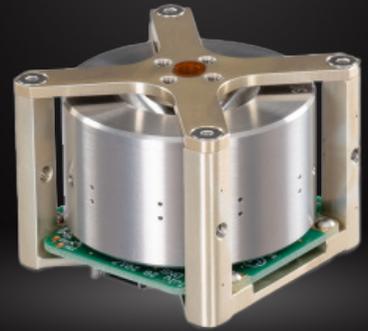


REACTION WHEEL

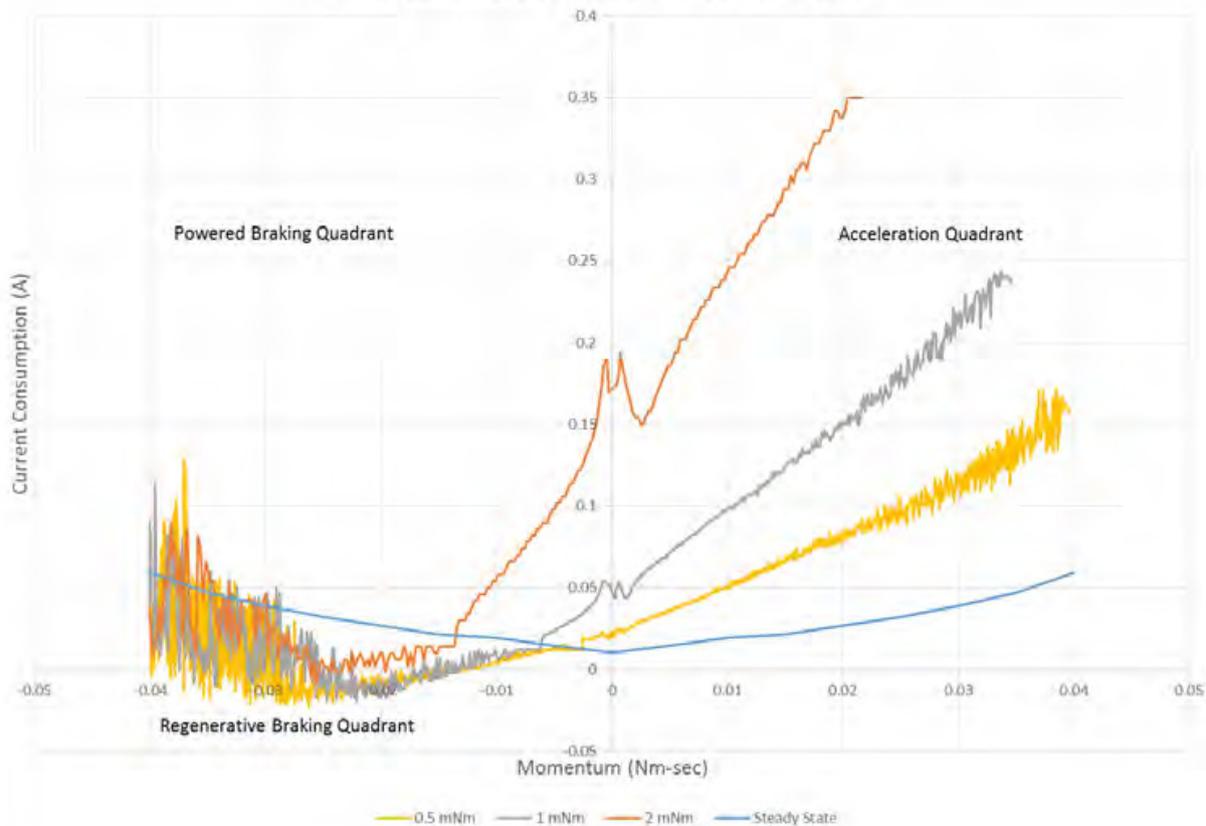
30 mNms RW-0.03 Data Sheet

Version 1, 14 July 2021



MOMENTUM	Nominal: 0.03 Nms Peak: 0.04 Nms (at 5 V supply)
TORQUE	± 2 mNm at 0.02 Nms ± 0.5 mNm at 0.04 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 40 mm Mass: 185 g
SUPPLY VOLTAGE	Nominal: 3.4 V to 6.0 V, Maximum: 8 V
SUPPLY POWER (28 V IN VACUUM)	1.8 W @ 0.02 Nms, +2 mNm 0.3 W @ 0.04 Nms, steady state 0.1 W @ 0.01 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	55 Units total on-orbit, on 20 satellites First launch April 28, 2008, design essentially unchanged Demonstrated 12 arc-sec RMS pointing on 7 kg satellite
PRICE	US\$25,000 each, +US\$2,000 for radiation lot-screened parts

Input Current at 5 V in Vacuum for Various Torques



Torque Box at 5 V in Vacuum

