

# REACTION WHEEL

## RW3-0.06 Data Sheet

Version 3.1 – 2025-03-31



<b>MOMENTUM</b>	Nominal: $\pm 0.06$ Nms Peak: $\pm 0.18$ Nms (at 28 V)
<b>TORQUE</b>	$\pm 20$ mNm at 0.12 Nms (at 28 V) – see below torque-box
<b>CONTROL MODE</b>	Speed or Torque
<b>COMMAND/TELEMETRY</b>	Redundant RS-485
<b>MECHANICAL</b>	Dimensions: 77 mm x 65 mm x 38 mm Mass: 233 g
<b>IMBALANCE</b>	Static: $< 1.2$ g·mm (average 0.25 g·mm) Dynamic: $< 7.5$ g·mm <sup>2</sup> (average 2.5 g·mm <sup>2</sup> )
<b>SUPPLY VOLTAGE</b>	7.5 V to 34 V (nominal 28 V)
<b>POWER (28 V in VACCUUM)</b>	Steady state max @ 0.12 Nms: 1.8 W Peak power at max torque: 60 W See below power curve for various torque commands and speeds
<b>ENVIRONMENT</b>	Thermal: $-30^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ (operating) Vibration: 14.1 gRMS* Radiation (TID): 20 krad (board level)
<b>FLIGHT HERITAGE</b>	Total of 317 units launched to orbit, with cumulated 934 years of heritage since the first design launched in 2014

\*Latest requalified level. Various prior design revisions have been qualified to higher levels.

