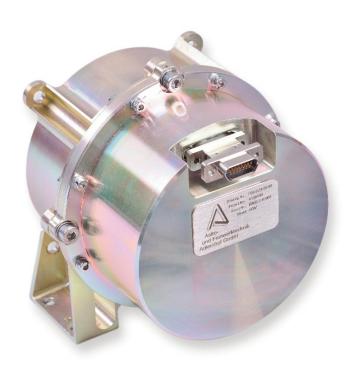


Space Technology

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Reaction Wheel RW 90 for Small and Micro Satellites The RW 90 is a **flight proven smart** Reaction Wheel with following features:

- Integrated wheel drive electronics with latch-up protection
- Different operation modes for speed and acceleration using model based controllers
- High torque and speed stability (low noise)
- Provides extensive housekeepings (e.g.: speed, voltage, current, temperatures)
- Internal compensation of friction and time delays
- Low level emitted vibrations, due to the mechanical design and the high level of alignments and balancing

Parameter Data Performance: Angular momentum 0.34 Nms @ 7800 rpm Nominal rotation speed 6000 rpm Max. rotation speed approx. 7820 rpm 0.015 Nm Max. reaction torque Mechanical: Mass < 0.9 kgDimension (with flange) 103 mm x 101 mm x 80 mm 4.2·10⁻⁴ kgm² Moment of inertia (rotating mass) Electrical: Voltage 18 V to 34 V Power consumption Standby (motor off) < 2.0 WConservation of nominal rotation speed ≤3.5 W Maximum (no limitations) ≤15 W Data interfaces: RS-485 (others on request) General: -20°C to +50°C Operation temperature range -30°C to +60°C Non-operation temperature range Design lifetime 7 years in low earth orbit Storage time 3 years (incl. max. 240 h of ground operation)

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