



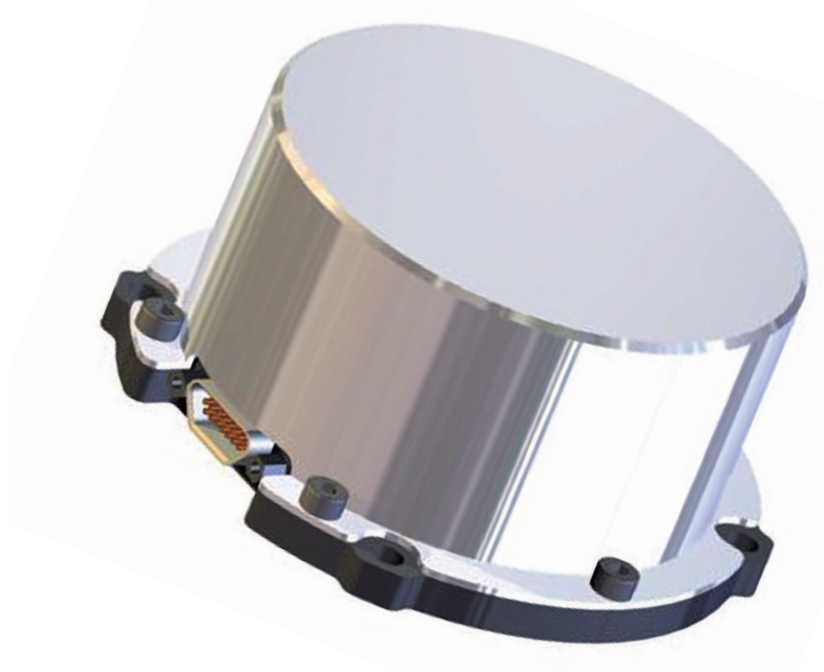
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## **Space Technology**

AOCS-Components



### **Reaction Wheel RW 35 for Nano and Micro Satellites**

The RW 35 is a **smart** Reaction Wheel with following features:

- Integrated wheel drive electronics
- 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)
- Low level emitted vibrations, due to the mechanical design and the high level of alignments and balancing

**Parameters****Data****Performance:**

Angular momentum	0.1 Nms @ 5 000 rpm
Nominal rotation speed	5 000 rpm
Max. rotation speed	approx. 5 100 rpm
Nominal torque	0.005 Nm

**Mechanical:**

Mass	0.5 kg
Dimension (with flange and connector)	95 mm x 95 mm x 40 mm
Moment of inertia (rotating mass)	$1.9 \cdot 10^{-4} \text{ kgm}^2$

**Electrical:**

Voltage	12 V to 24 V
Power consumption	
Standby (motor off)	$\leq 1.4 \text{ W}$
Conservation of nominal rotation speed	$\leq 2.5 \text{ W}$
Nominal torque at nominal speed	$\leq 4.5 \text{ W}$
Maximum (no limitations)	$\leq 5 \text{ W}$

<b>Data Interfaces:</b>	RS485 (others on request)
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**General:**

Operation temperature range	-20°C to +50°C
Non-operation temperature range	-30°C to +50°C
Design lifetime	5 years in low earth orbit
Storage time	3 years (incl. max. 240 h of ground operation)

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