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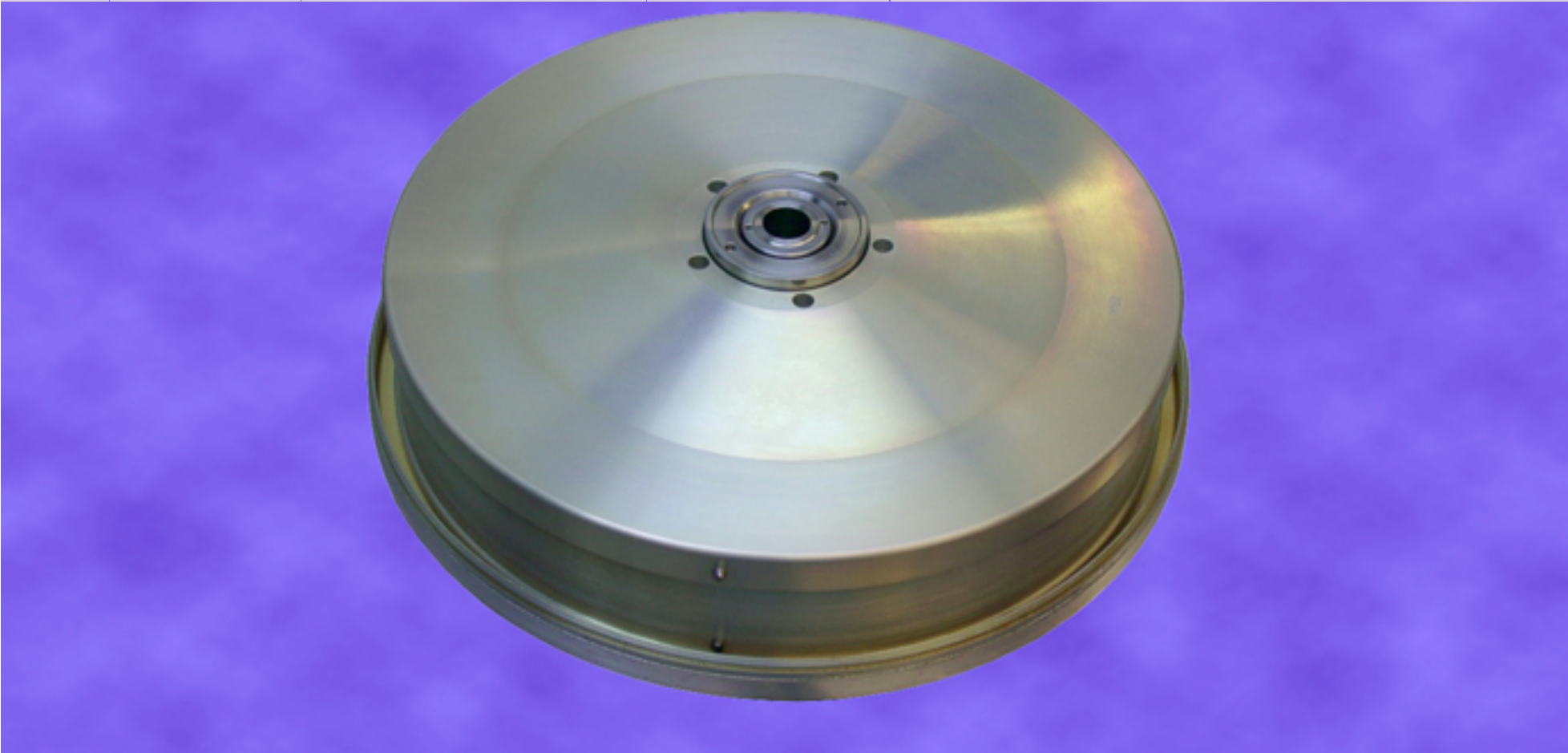
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# RSI 12 Momentum and Reaction Wheels

Put more than 40 years of Rockwell Collins space-wheel technology and 7,300 years of in-orbit operational time to work for you. The RSI 12 Momentum and Reaction Wheels feature integrated Wheel Drive Electronics at 4 to 12 Nms.

Our TELDIX® space wheels are available with an angular momentum storage capacity spanning a range between 0.04 Nms and 68 Nms. They accommodate the requirements of attitude control systems for spacecraft weighing between 30 kg and 7,000 kg. We also can customize a solution for you.

## › [Contacts](#)

## Features & Benefits

- Power/loss torque optimized
- Volume/mass optimized
- Hermetically sealed
- Modular configuration
- Fast adaptation to customer requirements
- Space-qualified subsystems (rotor, motor, bearing unit and electronics)
- Broad spectrum of different wheel types
- For satellites weighing 200 to 1,000 kg
- High reliability through heritage
- Usable as a momentum or reaction wheel
- More than 15 years of lifetime design

## Specifications

### Performance

RSI 12-75/60

Angular Momentum at Nominal Speed	12 Nms
Operational Speed Range	$\pm 6,000$ rpm
Speed Limiter (EMF)	$< 7,500$ rpm
Motor Torque at Nominal Speed	75 mNm
Loss Torque (max)	$< 20$ mNm
Steady State at Nominal Speed	$< 20$ W
Maximum Torque at Nominal Speed	$< 90$ W

## RSI 4-75/60

Angular Momentum at Nominal Speed	4 Nms
Operational Speed Range	$\pm 6,000$ rpm
Speed Limiter (EMF)	$< 7,000$ rpm
Motor Torque at Nominal Speed	75 mNm
Loss Torque (max)	$< 20$ mNm
Steady State at Nominal Speed	$< 20$ W
Maximum Torque at Nominal Speed	$< 90$ W

## Physical Specs

## RSI 12-75/60

Dimensions	
Diameter	247 mm
Height	85 mm
Mass	< 4.85 kg

## RSI 4-75/60

Dimensions	
Diameter	222 mm
Height	85 mm
Mass	< 3.7 kg

## Power

Power Interface	
Supply voltage	24 to 51 VDC
Input current	< 3.75 A
Galvanic isolation between primary return and secondary return	Yes
Preceding stage	Yes
On/off relay	Yes
Signal Interface	
Torque command and direction	Analog/bi-level
Speed measurement and direction	Analog/bi-level
Motor torque (current)	Analog

Bearing temperature	Analog (thermistor)
On/off status	Bi-level
On/off command	Pulses

## Environmental

Environmental Conditions	
Qualification/protoflight temperature	-10 to +55 °C (mineral oil) -25 to +75 °C (synthetic oil)
Operating temperature	-5 to +50 °C (mineral oil) -20 to +70 °C (synthetic oil)
Survival/non-operating temperature	-20 to +60 °C (mineral oil) -40 to +75 °C (synthetic oil)
Lifetime	> 15 years (in orbit)

## Typical System

## Main Components

Please contact Rockwell Collins for additional information on this product.

## Related Documents

## Publications

Technical documentation is developed to your requirements for the operation and maintenance of your product.

[Contact us for information.](#)

## Training

Our instructional design specialists and staff of experienced instructors develop and support solutions to meet your operator and maintenance training requirements. We offer a host of solutions to maximize your investment. On-site and customized training are available.

[Contact a representative.](#)

## Services & Support

## Tailored Services

Our facilities and capabilities allow us to offer a variety of support solutions from time and material repairs to fully integrated performance based logistics.



[Contact a representative](#)

## Related products and services

[High Motor Torque Momentum and Reaction Wheels](#)

[RDR 68 Momentum and Reaction Wheels](#)

[RSI 01 Momentum and Reaction Wheel 0.1 Nms](#)

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