

HR04 REACTION WHEEL SYSTEM

Small Satellite Class Reaction Wheel Assembly (RWA)

Honeywell is advancing the state of the art for a smallsat RWA application by offering a technical solution that preserves Honeywell high value, heritage and reliable operation. Introducing the HR04 RWA. This RWA has been designed to offer extreme flexibility in packaging options as well as providing precision RWA performance supported by advanced drive technology in a greatly reduced envelope package.



Reliability does not need to be compromised for a small scale RWA response in a large market demand.

PERFORMANCE ADVANTAGES:

- Honeywell reliability
- High output, low jitter performance for precision position and pointing control
- Plug and play ACS insertion
- Minimized vehicle integration time
- Application scalable optimization

KEY INTEGRATED HONEYWELL TECHNOLOGIES:

- Proven spin bearing design
- Insensitive to low or transitional operational speeds
- Optimized momentum density packaging through high speed operation
- Flexible vehicle digital interface

HR04 Performance

PARAMETER	UNIT	CAPABILITY*	
Momentum, per RWA	Nms	1 Nms @ 9000 rpm	
Net Output Torque, per RWA	Nms	.030 Nm	
Quiescent System Power	Watts	2.0	
Peak System Power, max at 9000 rpm	Watts	48	
Steady State System Power, max	at 9000 rpm	Watts	<17
	at 3000 rpm	Watts	<8
Mass Integrated Array	kg	< 2.6	
Envelope, H X W Integrated Array	cm	16.0 x 21.2 x 12.9	
Integral Electronics	No/Yes	Yes	
Mission Life	Years	5 minimum	
Storage Life	Years	1 minimum	
Parts Level	-	COTS	
Bearing	Size	101	
Op Temp Range	deg C	-10 to 60	
Vibration	Grms	16	
Motor	AC/DC	DC	
MCE Vehicle Interface - Digital	Bus Voltage	V	28 ± 6
	Interface	options	CAN, LVDS, RS422, CMOS
	Redundancy	Yes/No	Available
Unbalance	Static	gm-cm	1.3 max
	Dynamic	gm-cm ²	13 max
Radiation Hardness	Krad (Si)	20	
Packaging options		Honeywell Integrated Bracket	

* Performance values subject to change based on product advancement or specific user application needs.

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