

G-083

Stored Energy Two-Axis Free Gyroscope

The **G-083** is a miniature, lightweight, two-axis free gyroscope, actuated by spring stored energy, operating for up to 120 sec. It was especially designed to meet the need for short / medium range high-acceleration missions. The **G-083** has a single potentiometer, measuring Roll angles. The outer gimbal has freedom of 360° and an active range of 350°. A remote electrical pulse is used to actuate a pressure squib for uncaging the spring. **Features:**

- 350° active range; operation time up to 120 seconds;
- Highly resistant to shock and acceleration.

Applications:

 Man-portable anti-armor/anti-tank missiles, air-tosurface missiles, guided bombs, rockets, mortars and many other applications.



Specifications

Parameters	Units	Values	Tolerances
Gimbal Freedom			
Outer	deg.	360° continuous	-
Inner	deg.	360° contin. (operating: ±85° max)	-
Max. Outer Drift (Scorsby / random vibration /	deg.	4° @ 30 sec	-
180 rpm along roll axis)		6° @ 45 sec	-
Conductive Potentiometer			
Active range	deg.	±175°	-
Resistance	kΩ	5	±5%
Linearity	%	<0.5	-
Squib Circuit			
Squib resistance	Ω	0.18 – 0.22	-
Spin-up time	sec	≤0.2	-
Uncaging time	msec	≤50	-
Uncage current	А	2.5 @ -40°C	min.
No fire	А	1 @ 85°C	±5%
Residual resistance	Ω	50	min.

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G-083 (continued)

Parameters	Units	Values	Tolerances
Insulation			
Potentiometer-Case			
Squib-Case	MΩ	10 @ 100 VDC	min.
Potentiometer-Squib			
Sealing	atm*cc/sec	5 v 10 @ 10 ⁻³ psi	may
Leakage	atinactive	5 x 10 @ 10 psi	IIIdX.
Environmental	°C	-10 to +85	
Working temperature range	C	-40 10 +85	-
		250/50 msec/all axes	
Mechanical Shock	G	160/150 msec/all axes	-
		40/11 msec/all axes	
Random Vibration			
Non-operating	GRMS	4.5	-
Operating		0.8	-
Weight	gr.	165	±3%
Pin output Distribution	Pin 1-Potentiometer	Pin 2-Wiper	Pin 3-Potentio.
	Pin 4-Squib	Pin 5-Squib	-

Drawing







All dimensions are in mm

For Additional Information

To learn more about the G-083 Free Gyroscope or

other MTC products, contact MTC on +972 4 998 7772

or email marketing@mtcind.com

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