

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-to-surface missiles, guided bombs, rockets, mortars and many other applications.



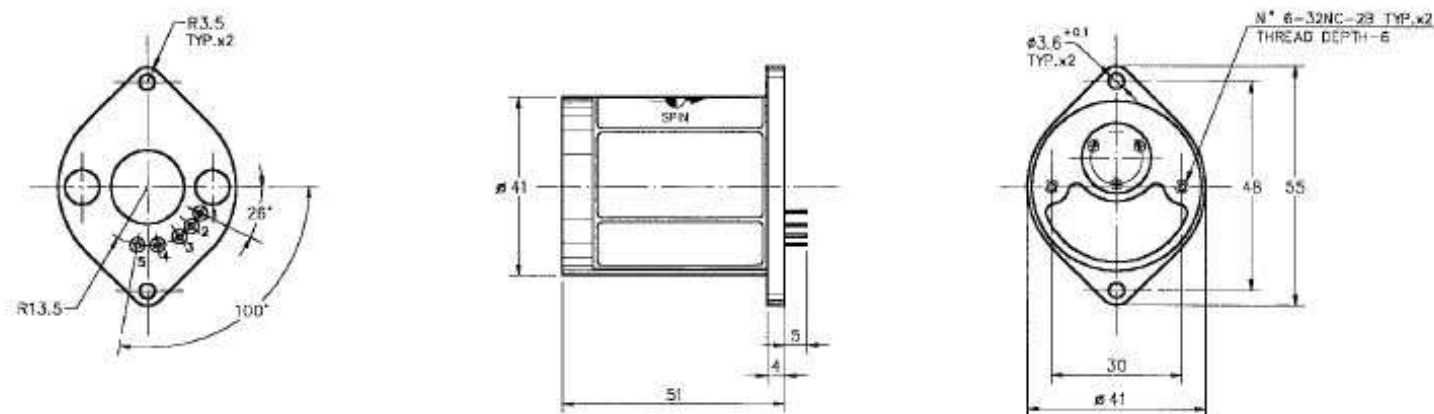
Specifications

Parameters	Units	Values	Tolerances
Gimbal Freedom			
Outer	deg.	360° continuous	-
Inner	deg.	360° contin. (operating: ±85° max)	-
Max. Outer Drift (Scorsby / random vibration / 180 rpm along roll axis)	deg.	4° @ 30 sec 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	A	2.5 @ -40°C	min.
No fire	A	1 @ 85°C	±5%
Residual resistance	Ω	50	min.

G-083 (continued)

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

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