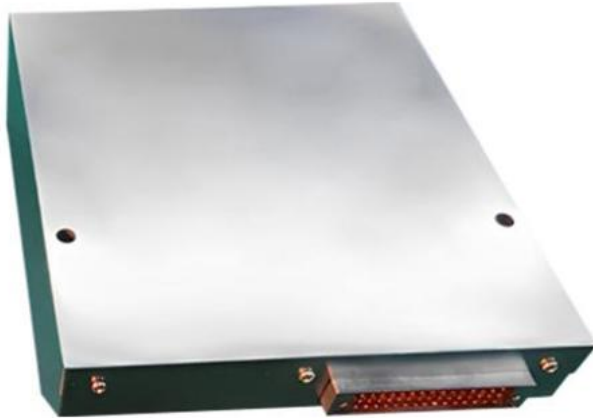


Ring Laser Gyroscope Two Frequency Machine Shaking



Ring Laser Gyroscope Two Frequency Machine Shaking is a high-precision digital dual-frequency machine shaking laser gyro produced by our company. It has the advantages of high precision, simple power supply, high integration and digital output. It can measure the angular motion of the carrier wave around the sensitive axis and output two quadrature square waves. It can be widely used in the integration of positioning/navigation, surveillance/reconnaissance, fire control and flight control of missiles and their carrier rockets, aircraft, unmanned aerial vehicles, ships, ships, armored vehicles and other fields.

Overview

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JIO90-RLG is available in A, B and C models to meet your different needs.

Features

Measure the rotation angle around its sensitive axis, and output two orthogonal square waves containing rotation information.

Performance

The main technical indicators that the laser gyroscope meets are shown in Table 1.

Table 1 Main Technical Indicators of Gyro

serial number	parameter	unit	Premium	Grade A	Grade B	Grade C	Remark
1	Zero bias	°/h	≤0.3				/
2	bias stability	°/h	≤1‰	≤3%	≤4%	≤5%	100s , 1σ
3	Zero bias repeatability	°/h	≤1‰	≤2 %	≤3%		1σ
4	random walk coefficient	°/h 1/2	≤0.4‰	≤0.6‰	≤0.7‰	≤1‰	/
5	Scale factor	"/pulse	1.865				/
6	Scale Factor Nonlinearity	ppm	≤1				/
7	Scale Factor Repeatability	ppm	≤1				1σ
8	Magnetic sensitivity	°/(h·Gs)	≤1.5‰	≤2‰			/
9	Maximum input angular rate	°/s	≥400				/

Environmental adaptability

- a) Working temperature : -40 °C ~ + 65 °C
- b) Storage temperature: -45 °C ~ + 85 °C
- c) Vibration: 9.6g in total;
- d) Shock: 30g/11ms (half sine) or 75g/6ms (half sine);
- e) Low pressure: 5000m above sea level.

Frequency (Hz)	10	100	200	300	400	500	800	2000
Power spectral density (g 2 /hz)	0.1	0.6	0.2	0.06	0.04	0.02	0.005	-6db

Power supply and electrical interface

- a) Power supply
Type: ± 5V , +15V
Requirements: +5V - current 180mA , stability ± 50mV , ripple < 50mV
-5V - current 60mA , stability ± 50mV , ripple < 50mV
+15V - current 240mA , stability ± 100mV , ripple < 100mV
- b) Power consumption: < 6W
- c) Electrical interface type: J30JM-37ZK
- d) Interface definition: The definition of electrical interface pins is shown in Table 2.

Table 2 Electrical interface definition table

Pinserial number	Definition	Remark	Pinserial number	Definition	Remark
1	NC	null	/	/	/

2	GND	signal ground	20	NC	null
3	NC	null	twenty one	NC	null
4	NC	null	twenty two	NC	null
5	NC	null	twenty three	NC	null
6	Keep for yourself	/	twenty four	NC	null
7	NC	null	25	Keep for yourself	/
8	Keep for yourself	/	26	NC	null
9	COS	Square wave output signal 2TTL level	27	COS	Square wave output signal 2 TTL level
10	GND	signal ground	28	GND	signal ground
11	SIN	Square wave output signal 1TTL level	29	SIN	Square wave output signal 1 TTL level
12	T1	Platinum resistance 1	30	T2	Platinum resistance 2
13	T3	Platinum resistance thermometer 3	31	T4	Platinum resistance 4
14	TCOM	4 platinum resistance common terminals	32	TCOM	4 platinum resistance common terminals
15	GND	+5V , -5V power ground	33	GND	+5V , -5V power ground
16	+5V	power input	34	+5V	power input
17	+15V	power input	35	+15V	power input
18	15VGND	+15V power ground	36	15VGND	+15V power ground
19	-5V	power input	37	-5V	power input

The models of platinum resistors 1 , 2, and 3 are Pt1000

Appearance and mechanical interface

- a) Weight: $\leq 1.8\text{kg}$
- b) Shape and mechanical interface: as shown in Figure 1.

