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Ring Laser Gyro Two Frequency Machine Shaking

Ring Laser Gyro 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.

Ring Laser Gyro Two Frequency Machine Shaking Overview

Ring Laser Gyroscope-JIO70 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.
JIO70-RLG is available in A, B and C models to meet your different needs

Ring Laser Gyro Two Frequency Machine Shaking Features

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

Performance

JIO70-RLG -type laser gyroscope are shown in Table 1.

Table 1 Main Technical Indicators of Gyro

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serial number	parameter	unit	Grade A	Grade B	Grade C	Remark
1	Zero bias	°/h	≤0.5			/
2	bias stability	°/h	≤0.3 %	≤0.5%	≤0.8%	100s , 1σ
3	Zero bias repeatability	°/h	≤0.3 %	≤0.5%	≤0.8 %	1σ
4	random walk coefficient	°/h 1/2	≤0.5‰	≤0.7‰	≤1.5‰	/
5	Scale factor	"/pulse	2.568			/
6	Scale Factor Nonlinearity	ppm	≤3			/
7	Scale Factor Repeatability	ppm	≤3			1σ
8	Magnetic sensitivity	°/(h·Gs)	≤2‰			/
9	Maximum input angular rate	°/s	≥ ± 400			/
10	Start Time	the s	≤10			/

Environmental adaptability

a) Working temperature : -40 ℃ ~ + 65 ℃
b) Storage temperature: -45 ℃ ~ + 85 ℃
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: J30J-25ZKP
d) Interface definition: The definition of electrical interface pins is shown in Table 2.

Table 2 Electrical interface definition table

pin number	definition	Remark
1	+15V	power input

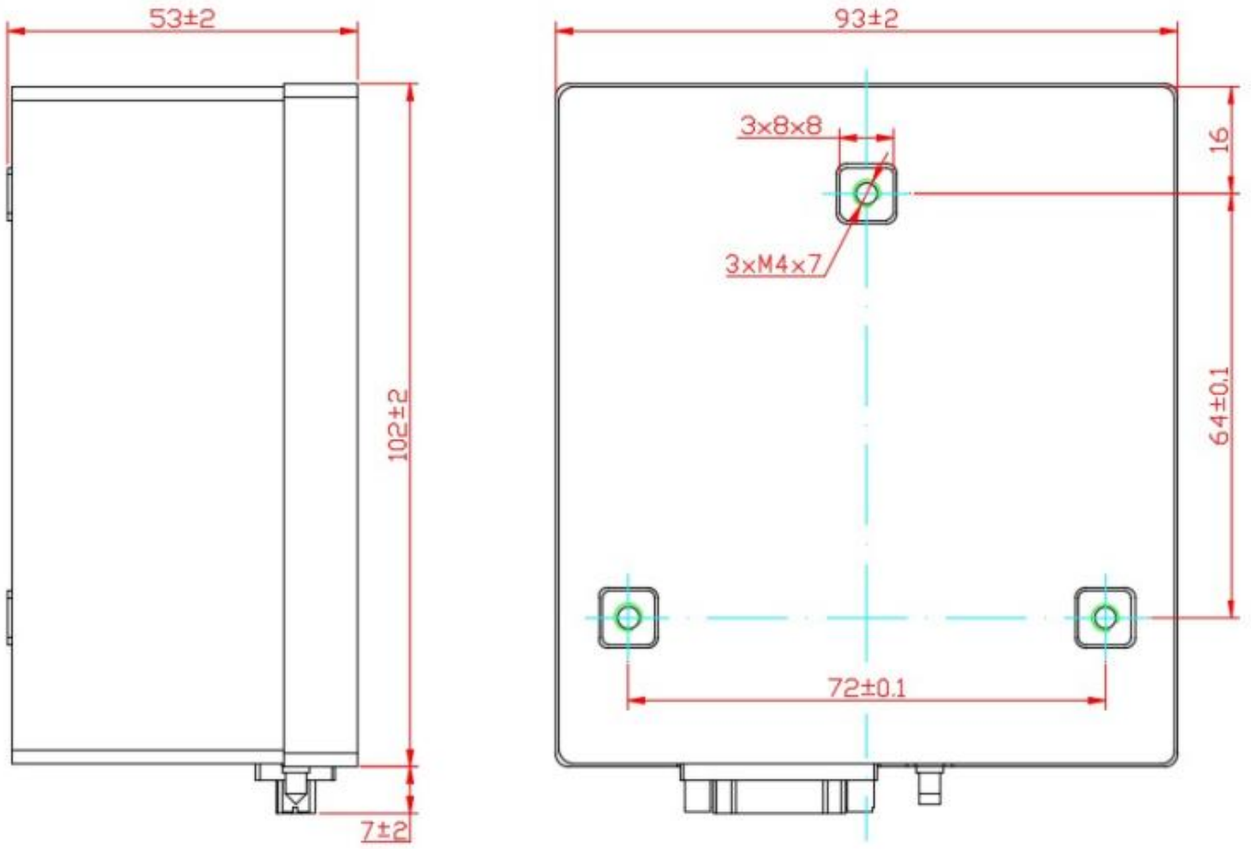
2	+15VGND	+15V power ground
3	NC	null
4	GND	+5V , -5V power ground
5	NC	null
6	+5V	power input
7	-5V	power input
8	AOUT	Square wave output signal 1 (TTL level)
9	BOUT	Square wave output signal 2 (TTL level)
10	TMP3	Platinum resistance thermometer 3
11	TCOMA	3 platinum resistance common terminals
12	TMP1	Platinum resistance 1
13	TMP2	Platinum resistance 2
14	+15V	power input
15	+15VGND	+15V power ground
16	NC	null
17	GND	+5V , -5V power ground
18	NC	null
19	+5V	power input
20	-5V	power input
twenty one	AOUT	Square wave output signal 1 (TTL level)
twenty two	BOUT	Square wave output signal 2 (TTL level)
twenty three	GND	+5V , -5V power ground
twenty four	NC	Spinning Top
25	NC	Spinning Top
The models of platinum resistors 1 , 2, and 3 are Pt1000		

Reliability

MTBF: 10000h
Continuous working time: the continuous working time is not less than 24 hours after power-on.

Shape and mechanical interface

a) Weight: ≤900g ±100g
b) Shape and mechanical interface: as shown in Figure 1.


53±2
102±2
7±2
93±2
3×8×8
16
3×M4×7
64±0.1
72±0.1