



## STG-120H/HC A Precision Digital Closed-Loop Fiber Optic Gyroscope with Optics Mechanics and Electricity Integration

Our Product Introduction

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### Basic Information

- Place of Origin: SHENZHEN
- Brand Name: FOVA
- Certification: CE;FCC
- Model Number: STG-120H/HC
- Minimum Order Quantity: 10
- Price: Negotiable
- Delivery Time: 25 work day
- Supply Ability: 5000pcs/M



FG-120C/H

### Product Specification

- Highlight: Precision Digital Fiber Optic Gyroscope,  
Electricity Integration Fiber Optic Gyroscope,  
Optics Mechanics Fiber Optic Gyroscope



### More Images



## Product Description

### STG-120H/HC three-axis split fiber optic gyroscope

a full solid-state high-precision digital closed-loop fiber optic gyroscope integrating optics, mechanics and electricity.



**FG-120C/H**

### STG-120H/HC three-axis split fiber optic gyroscope

a full solid-state high-precision digital closed-loop fiber optic gyroscope integrating optics, mechanics and electricity.

Indicators	Model	FG-120C/H
Performance indicators	bias stability <sup>①</sup> (°/h, 1σ)	0.005/0.003
	bias stability <sup>②</sup> (°/h, 1σ)	0.0015/0.001
	bias stability <sup>③</sup> (°/h, full temperature, 1σ)	0.01/0.005
	bias repeatability(°/h, 1σ)	0.0015/0.001
	random walk(°/h <sup>1/2</sup> )	0.0003/0.0002
	scale factor nonlinearity (ppm)	2/1
	scale factor asymmetry (ppm)	2/1
	scale factor repeatability(ppm)	5/5
	dynamic range(°/s)	±500
Mechanical/Electrical interface	size(mm)	120×120×36
	weight(g)	870±10/880±10
	steady state power consumption at normal temperature(W)	<2.5
	power supply(V)	+5
	communication interface	RS422

**Remarks:**

- ① Static test at room temperature, 10s smooth, 1 $\sigma$ ;
- ② Static test at room temperature, smooth for 100s, 1 $\sigma$ ;
- ③ The temperature change rate is 1°C/min, smooth for 100s, 1 $\sigma$ .

**■ Product introduction**

STG-120H/HC three-axis fiber optic gyroscope is a full solid-state high-precision digital closed-loop fiber optic gyroscope integrating optics, mechanics and electricity. Based on the principle of Sagnac, it is composed of erbium-doped fiber light source, fiber coupler, photodetector, integrated optical phase modulator, fiber sensing ring, circuit and structure. Designed for navigation level precision inertial measurement system. It has the characteristics of high reliability and flexible structure. It is a highly customized product produced according to the customer's platform. HC type can reach precision level precision.

**■ Product features**

- Single 5V power supply, extremely low power consumption
- Excellent all-temperature performance
- Excellent start-up performance, the nominal index can be reached when the power is turned on, and no preheating is required
- Excellent environmental adaptability, strong impact and vibration resistance
- Interference fringe recognition technology, supporting full dynamic range cold start
- High reliability
- No dead zone

**■ Typical applications**

- Strapdown inertial navigation system
- Attitude indicator
- Optical fiber compass
- Positioning and orientation system
- "Three self" inertial navigation system

**■ Performance indicators**

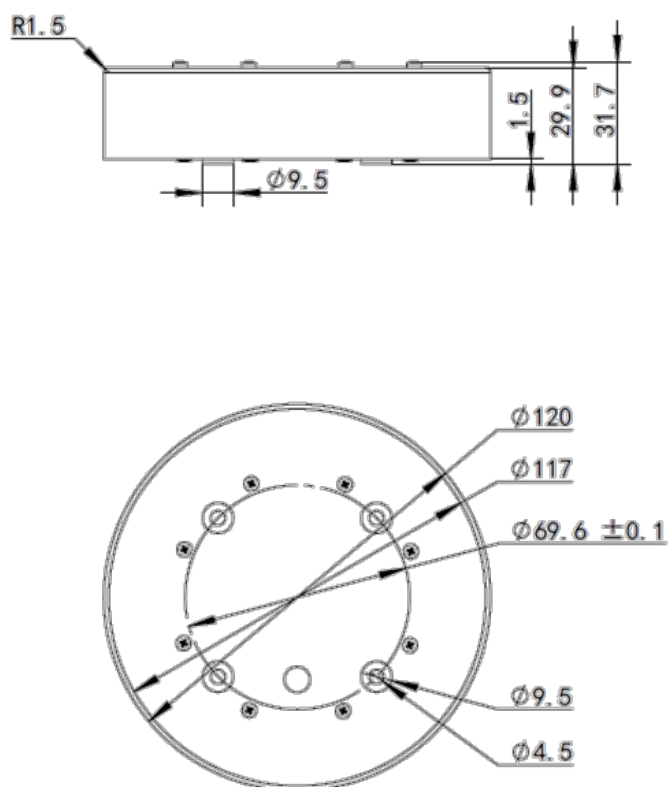
- Turn-on time (s) 3
- Dynamic range (°/s)  $\pm 500$
- Zero position (°/h)  $\leq 0.25$
- Bias stability① (°/h, 1 $\sigma$ )  $\leq 0.005/0.003$
- Bias stability② (°/h, 1 $\sigma$ )  $\leq 0.0015/0.001$
- Bias stability③ (°/h, 1 $\sigma$ )  $\leq 0.008/0.005$
- Bias repeatability (°/h, 1 $\sigma$ )  $\leq 0.0015/0.001$
- Bias magnetic sensitivity (°/h/Gs)  $\leq 0.005$
- Random walk (°/h 1/2)  $\leq 0.0003$
- Scale factor non-linearity (ppm)  $\leq 5/5$
- Scale factor asymmetry (ppm)  $\leq 2/2$
- Scale factor repeatability (ppm)  $\leq 5/5$
- Threshold (°/h)  $\leq 0.005/0.003$
- Resolution (°/h)  $\leq 0.005/0.003$
- Bandwidth(Hz)  $\geq 200$

**■ Physical/Electrical**

- Power supply +5V
- Steady-state power consumption  $\leq 3W$
- Steady-state power consumption at full temperature  $\leq 4W$
- Instantaneous power consumption at startup  $\leq 4W$
- Dimensions of circuit box 60mm×60mm×28mm
- Dimensions of meter  $\Phi 120mm \times 23.3mm$
- Weight  $< 2300g$
- Electrical form RS422

**■ Environmental adaptability**

- Operating temperature -45°C - +70°C
- Storage temperature -55°C - +80°C
- Vibration 6.06g(RMS, 20Hz-2000Hz)
- Impact 30g, 6ms-8ms
- Average trouble-free time 8000h



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