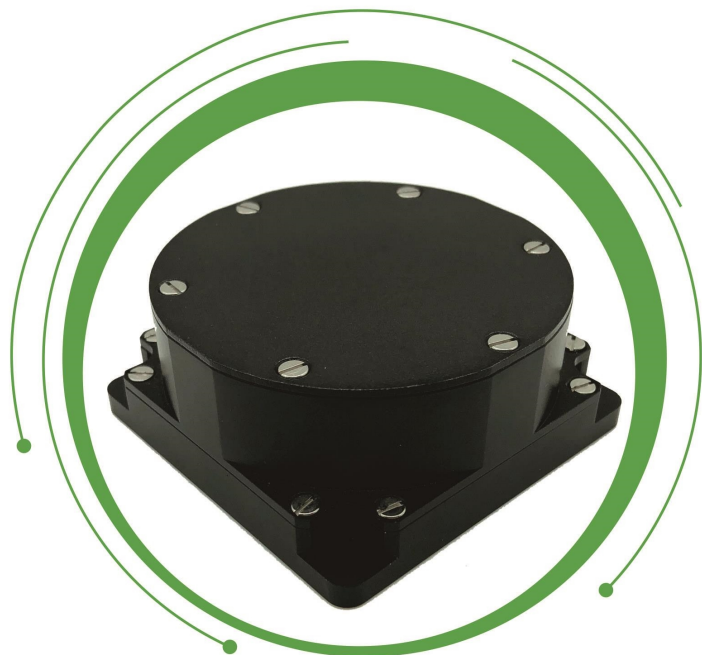


F70HB type Medium and high precision Fiber optic gyroscope



Introduction

The fiber optic gyroscope, as a new type of all-solid-state optical gyroscope, adopts the 1310 scheme and has the advantages of fast start-up, wide measurement range and high reliability. F70HB single-axis medium-high precision fiber optic gyroscope instrument can be applied to the application requirements of medium-high precision inertial guidance system such as land positioning orientation, vehicle-mounted north finder, airborne heading, marine gyroscope compass, etc.

Application Scope

This manual is only applicable to F70HB type products, including performance indicators, technical conditions, external dimensions and installation and use. Among them, the technical conditions include the environmental range, electrical performance, and physical characteristics of the product.

Main Parameters

Table 1 Main performance indicators of the product

	1310	1550	
Zero stability	$\leq 0.02^\circ/\text{hr}(1\sigma, 10\text{s})$	2h continuous test, 10s smoothing results	
Zero stability	$\leq 0.01^\circ/\text{hr}(1\sigma, 100\text{s})$	2h continuous test, 100s smoothing results	
Stability time	<10s		
Zero drift repeatability	$\leq 0.02^\circ/\text{hr}(1\sigma)$	Calculated results from 6 tests	
Full temp zero drift repeatability	≤ 0.05		
Random walk coefficient	$\leq 0.005^\circ/\sqrt{\text{hr}}$		
Scale factor non-linearity degree	$\leq 10\text{ppm}(1\sigma)$	room temperature	
Scale factor repeatability	$\leq 10\text{ppm}(1\sigma)$	room temperature	
Full temp scale factor repeatability	≤ 200	$\leq 100\text{ppm}(1\sigma)$	-40°C ~ +60°C
Dynamic range	$\pm 500^\circ/\text{s}$		
Magnetic field sensitivity	$\leq 0.02^\circ/\text{hr}/\text{Gs}$		
Operating temperature	-40°C ~ +70°C		
Storage temperature	-50°C ~ +70°C		
Vibration conditions	4.2g, 20Hz ~ 2000Hz	Sweeping frequency vibration without resonance	

External Dimension Drawing

