ER-TFOG-50 High-Quality Three-Axis Fiber Optic Gyroscope

Introduction

High-Quality Three-Axis Fiber Optic Gyroscope is an inertial angular rate sensor based on the optical sagnac effect, used to measure the angular rate of the carrier along the sensitive axis of the product. The angular rate sensing unit of this product is an optical fiber ring, which uses a digital closed-loop detection circuit to extract the optical path difference of the optical fiber ring sensitive to the counterclockwise propagating light caused by the external physical angular velocity, and at the same time convert the optical path difference signal into a voltage signal for closed-loop feedback and control, to achieve signal modulation and demodulation, to achieve the purpose of high-precision angular velocity signal detection.

This product is composed of optical angular velocity sensitive unit and signal detection. It provides three-axis angular increment rate information and internal temperature information.

Application

The products are mainly suitable for inertial navigation system, positioning and orientation system, attitude measurement system, servo stability system and other applications.

Specifications

No.	Test Items	Unit	Skills Requirement
1	Start Time	s	3
2	Zero Bias	°/h	≤5

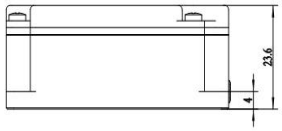
3	Zero Bias Stability (10s smooth, 1σ)	º/h	≤0.5
4	Zero Bias Repeatability	º/h	≤0.5
5	Random Walk Coefficient	$º/h^{1/2}$	≤0.05
6	Scale Factor Non-linearity	ppm	≤100
7	Scale Factor Repeatability	ppm	≤100
9	Operating Temperature	℃	-40~+60
10	Storage Temperature	℃	-50~+70
11	Dynamic Range	º/s	±1000
12	Supply Voltage	V	+5V
13	Bandwidth	Hz	>200
14	Steady-State Power Consumption	W	≤6

Power Requirements

The product uses +5V DC power supply, no negative power supply. The power supply requirements are shown in the table

No.	Name	Claim
1	Power Supply Accuracy	±5%
2	Power Ripple (Vpp)	20mV
3	Supply Current	>2A

Shape And Installation Dimensions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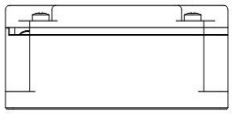

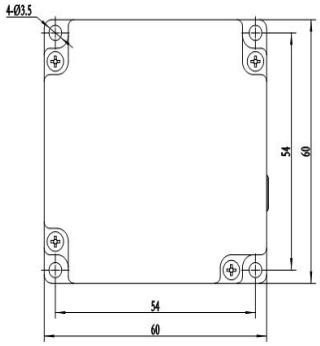
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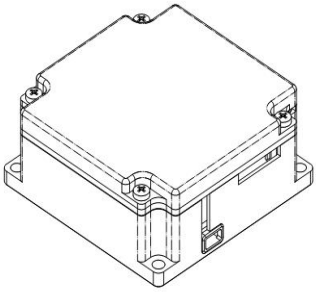

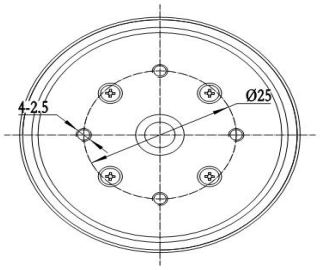
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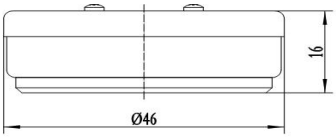
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