

L-150型激光陀螺仪

L-150 laser gyroscope



产品概述

L-150型激光陀螺仪是一款中精度高可靠性惯性角速度传感器，基于萨格纳克原理，由二频机抖氦氖激光器本体、低噪声前置放大器和高精度控制电路组成，广泛应用于船用平台罗经、中程战术导弹、定位定向系统、直升飞机、航姿系统、自行火炮、鱼雷等。

Product overview

L-150 laser gyroscope is a medium-precision and high-reliability inertial angular velocity sensor based on the Sagnac principle, which is composed of two-frequency machine jitter-helium-neon laser body, low-noise preamplifier and high-precision control circuit, and is widely used in marine platform compasses, medium-range tactical missiles, positioning and orientation systems, helicopters, attitude systems, self-propelled guns, torpedoes, etc.

产品特点

数字化输出，应用便捷
长寿命，MTBF超过10000h
+5V电压，功耗小
抗冲击能力强，环境适应性好

Product features

Digital output, convenient for use
Long life, more than 10000h of MTBF
+5V voltage with low power consumption
Strong impact resistance and good environmental adaptability

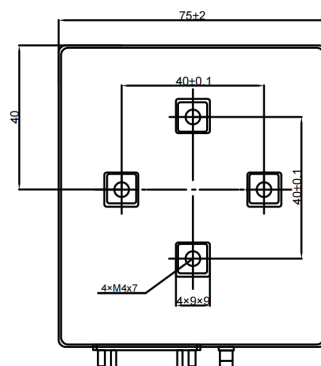
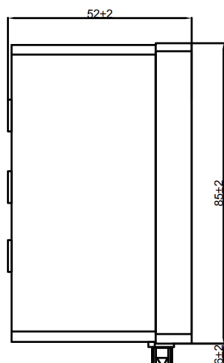
产品应用

车载和机载定位定向系统、惯性导航系统、高精度寻北仪、姿态测量系统、高铁轨道测量系统、道路弯沉测量

Product application

On-board and airborne positioning and orientation systems, inertial navigation systems, high-precision north seekers, attitude measurement systems, high-speed rail track measurement systems, road deflection surveys

结构尺寸 Structural dimensions



技术指标 Technical indicators

规格 Specifications

型号 Type	L-150	
启动时间 Start-up time	≤5s	
测量范围 Measuring range	±400°/s	
零偏稳定性 Bias stability	0.002~0.003°/h(1σ) 0.003~0.006°/h(1σ) 0.006~0.01°/h(1σ) 0.01~0.025°/h(1σ)	
零偏稳定性（全温） Bias stability (full temperature)	≤0.01°/h, 100s	
零偏重复性 Bias repeatability	≤0.003°/h(1σ) ≤0.008°/h(1σ)	≤0.005°/h(1σ) ≤0.015°/h(1σ)
角度随机游走系数 Angle random walk coefficient	≤0.002°/h ^{1/2}	
标度因数稳定性 Scale factor stability	≤5ppm	
标度因数非线性度 Scale factor nonlinearity	≤5ppm	
标度因数重复性 Scale factor repeatability	≤5ppm	
标度因数不对称性 Scale factor asymmetry	≤5ppm	
标度因数稳定性（全温） Scale factor stability (full temperature)	≤150ppm	
磁场敏感性 Magnetic field sensitivity	≤0.003°/h/Gs	
带宽 Bandwidth	≥200Hz	
MTBF	≥10000h	

电气/机械 Electrical/Mechanical

外形尺寸	85*75*52mm
重量 Weight	< 660g
输入电压 Input voltage	+5V
功耗 Power waste	2.5W（典型）5W（最大）
工作温度 Working temperature	-40~+70℃
存储温度 Storage temperature	-55~+85℃
随机振动 Random vibration	9.58g, 20~2000Hz
对外连接器 External connector	J30JM-25ZKP
对外电气接口 External electrical interface	RS-422/485