

L-190型激光陀螺仪

L-190 laser gyroscope



产品概述

L-190型激光陀螺仪是一款高精度高可靠性的惯性角速度传感器，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，广泛用于长航时飞机、舰船、中远程导弹等。

Product overview

L-190 laser gyroscope is a high-precision and high-reliability inertial angular velocity sensor based on the Sagnac principle, which is composed of a two-frequency machine jitter-helium-neon laser body, low-noise preamplifier and high-precision control circuit, and is widely used in long-endurance aircraft, ships, medium and long-range missiles, etc.

产品特点

数字化输出，应用便捷
长寿命，MTBF超过20000h
+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 20000h of MTBF
+5V voltage with low power consumption
Strong impact resistance and good environmental adaptability

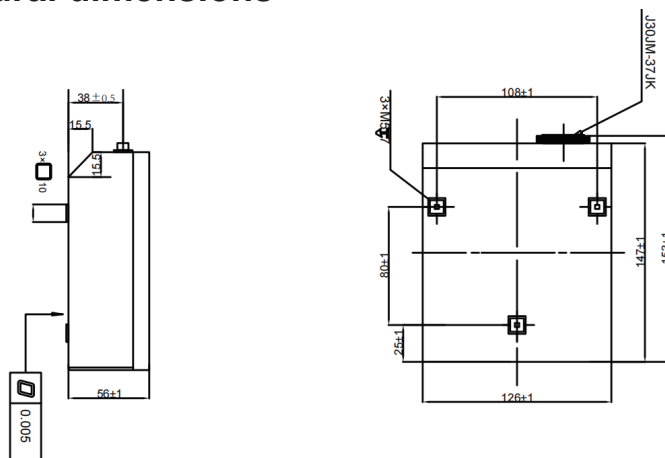
产品应用

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-190
启动时间 Start-up time	≤8s
测量范围 Measuring range	±400°/s, 最大7200°/s
零偏稳定性 Bias stability	≤0.003°/h(100s,1σ)
零偏稳定性(全温) Bias stability (full temperature)	≤0.003°/h, 10s
零偏重复性 Bias repeatability	≤0.0015°/h
角度随机游走系数 Angle random walk coefficient	≤0.0005°/h ^{1/2}
标度因数稳定性 Scale factor stability	≤2ppm
标度因数非线性度 Scale factor nonlinearity	≤2ppm
标度因数重复性 Scale factor repeatability	≤2ppm
标度因数不对称性 Scale factor asymmetry	≤2ppm
标度因数稳定性(全温) Scale factor stability (full temperature)	≤80ppm
磁场敏感性 Magnetic field sensitivity	≤0.001°/h/Gs
带宽 Bandwidth	≥200Hz
MTBF	≥20000h

电气/机械 Electrical/Mechanical

外形尺寸 Size	148*126*57mm
重量 Weight	< 1600g
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	7.29g,20~2000Hz
对外连接器 External connector	J30J -37JK
对外电气接口 External electrical interface	RS-422