

INS170

Fiber Optic Inertial Navigation System

◆ PRODUCT INTRODUCTION

INS170 is a self-developed fiber-optic inertial navigation system with a very small size and extremely lightweight. It has a self-north-seeking function and is very suitable for use with drones. It can traverse dozens of kilometers of areas without GNSS.

◆ FEATURES

- * Small size, light weight $\leq 600g$
- * Fiber optic inertial navigation has the function of self north-seeking

◆ APPLICATIONS



Unmanned Vehicles



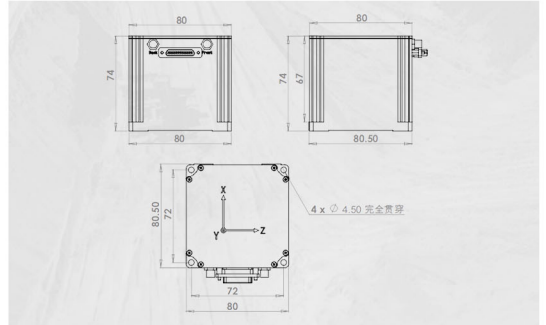
Drone Navigation



Optoelectronic Pod Control



Maritime EW Protection



PERFORMANCE

Parameters			
System Specifications	North-seeking Accuracy	$\leq 0.8^\circ \cdot \text{sec}\varphi$ (RMS)	
	Heading Accuracy	≤ 0.1	
	Attitude Accuracy	≤ 0.05 (RMS)	
	Position Accuracy	Pure inertial navigation (no GNSS)	$\leq 1\text{km}/10\text{min}$ (CEP)
		Satellite combination	1.2m(Single point positioning,RMS)
	Heave Accuracy	5cm or 5%	
	Speed Accuracy	$\leq 0.02\text{m/s}$ (satellite combination, RMS)	
	Start-up Time	$\leq 5\text{s}$	
	Align Time	$\leq 1-2$ (dual antenna satellite assistance)	
≤ 5 (pure inertia)			
Data Update Rate	1~100HZ		
Gyro	Range	$\pm 500^\circ/\text{s}$	
	Bias stability	$\leq 0.3^\circ/\text{h}$	
Accelerometer	Range	$\pm 20g$	
	Bias stability	$\leq 0.5\text{mg}$	
Physical properties	Supply voltage	12-36 (DC) V	
	Power consumption	$\leq 8\text{W}$	
	Operating Temperature	$-40 \sim +65^\circ\text{C}$	
	Storage Temperature	$-50 \sim +80^\circ\text{C}$	
	Material	Aluminum	
	Dimensions	80×80×74mm	
	Weight	600g	
Shock and Vibration		Meet the requirements of GJB150.16A-2009 and GJB150.18A- 2009	
Interface	Interface form	2×RS422, 1×RS232, 1×CAN, 1×Ethernet	