INS970

Fiber Optic Integrated Navigation System

- Rich interfaces, can be connected to odometer, DVL and other sensors
- Strong scalability, allowing customization of diverse statement protocols.
- Adaptable to various environments, the product suits applications in sea ,land, air and other fields.

System Specifications

North-seeking Accuracy	≤0.05 °*secφ (RMS)
Heading Accuracy	≤0.05°
Attitude Accuracy	≤ 0.01° (RMS)
Position Accuracy	Inertial navigation ≤ 0.8nm/h（CEP）
	Satellite combination ≤1.2 m （single point positioning, RMS）
	Odometer combination 0.1% ×D (D is the mileage）
	DVL combination 0.3%×D (D is the mileage)
Velocity Accuracy	≤ 0. 0 2 m / s (satellite combination, RMS)
Heave Accuracy	5cm & 5%
Startup Time	≤ 5s
Align Time	≤ 1 - 2 min （ dual antenna satellite assist）
	≤ 5 min （ pure inertia）
Data Update Rate	0.1Hz-100Hz

Device Specifications

Gyro Input Range ±1000°/s	Bias Stability ≤ 0.007°/h (1σ,100s@room temperature)
Accelerometer Input Range ±30 g	Bias Stability ≤ 30 ug (1 σ,10s@room temperature)

Physical Properties

Power Supply 18-36V（DC）	Power Consumption ≤ 15W
Operating Temperature -40℃ ~ 65℃	Material Aluminium
Storage Temperature -50℃ ~ 80℃	Weight ≤ 3kg
Dimensions	160×132×117（mm）
Shock、Vibration	Meet the requirements of GJB150.16A-2009、GJB150.18A-2009

Interface Characteristics

Form	3×RS232, 1×RS422, 1×PPS, 1×CAN, 1×RJ45

- INS970 is a fiber-optic inertial integrated navigation system independently developed by the company. It comprises closed-loop fiber-optic gyroscope, quartz accelerometer, and satellite receiver.
- The product utilizes advanced satellite/inertial information fusion technology, tailored for navigation and control of moving carriers. Employing Kalman technology, it estimates and compensates for errors in inertial components, ensuring continuous, stable, and reliable navigation information output even in cases of satellite signal loss.