

## HT-50-1 Fiber Optic Gyro

### ➤ Product characteristics

Small volume, light weight, high reliability,

Only 5V power supply, low power consumption

### ➤ Product description

HT-50-1 is a set of optical, mechanical, electrical integration of miniaturized solid-state digital closed-loop single-axis fiber optic gyroscope, is the country's international small and lightest single-axis closed-loop fiber optic gyroscopes, based in Zagreb Naik (SAGNAC) principle, by the SLD light source, optical fiber coupler, a photodetector, an integrated optical phase modulators, optical fiber sensing loop, the circuit structure and composition, followed the traditional fiber optic gyroscope classic design, using sophisticated FOG manufacturing process, small size, light weight, low power consumption, quick start, the interface is simple, easy to use and other advantages, is the control field, ideal for low-precision angular rate sensors, it is widely used in the national economy construction and defense equipment each inertial measurement and control field.

### ➤ Applications

- ✧ photoelectric nacelle /air platform
- ✧ SINS/INS
- ✧ optical/photographic instrument
- ✧ stabilized platform
- ✧ inertial measurement

➤ **Specifications**

|                                 |   |
|---------------------------------|---|
| Rate range                      | -1000(°)/s~+1000(°)/s                             |
| Bias stability                  | 0.3(°)/h~1 (°)/h                                  |
| Bias repeatability              | 0.3(°)/h~1 (°)/h                                  |
| Scale Factor non-linearity (1σ) | ≤100ppm   |
| scale factor asymmetry (1σ)     | ≤100ppm   |
| Scale Factor stability (1σ)     | ≤100ppm   |
| Power supply                    | only+5V   |
| Bandwidth                       | ≥500Hz  |
| Readiness time                  | 5s  |
| Output mode                     | RS422   |
| interface feature               | 15PIN Micro rectangular connector<br>( optional ) |
| Operating Temp                  | -40℃~+60℃   |
| vibration                       | 6.06g(RMS), 20Hz~2000Hz                           |
| Overall Dimensions              | 52×52×40mm <sup>3</sup>                           |
| weight                          | ≤170g   |

➤ **Outline physical map**



➤ **Fiber Optic Gyro to use**

A) electrical check

Gyroscope each new electrical connections, and deal with the gyro power supply for electrical inspection, to ensure the electrical and electrical point between the housing and there is no short circuit, side Ketong electric.

B) gyroscope through electric

Gyroscope check the electrical connection before the electric connection is correct, you can power.

C) the angular motion information acquisition

In the normal operation of the gyroscope, the gyroscope output can be collected through the 422 serial port.

D) gyro power off

Once the gyroscope is completed, the power supply of the gyroscope can be shut down, and the power down to the next power down time should be at least 3min or more.

➤ **Maintenance requirements**

A) The gyroscope is a precision optical device, which should be packaged by a special packing box with vibration isolation function;

B) gyroscope in the process of transportation and use, especially in gyro installation should be gently, is strictly prohibited throw, collisions, such as the impact of strenuous exercise;

C) users without the consent of the manufacturer shall not open the gyro shell or remove the gyro.