

**FG 2321 R07 Series**

**Three-axis Integrated Fiber-optic Gyro**

# **Technical Manual**

**V1.0**

### FEATURES

- All-digital closed-loop control
- Micro-signal correlation detection technology
- ITAR-free design for global accessibility
- Low power consumption and compact size
- RS422 digital output (customizable)
- Wide operating temperature:  $-45^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$
- High shock and vibration resistance

### APPLICATIONS

- Airborne navigation
- Unmanned aircraft/ship/vehicle
- Positioning and orientation systems
- Ship and aviation systems
- Infrared pod servo guidance
- Orbital detection and attitude control
- Civilian and commercial projects

### DESCRIPTION

The AFG2321R is a medium-precision, three-axis fiber-optic gyro (FOG) that combines advanced digital closed-loop control and micro-signal correlation detection technologies. Its miniaturized optical circuit components reduce volume while maintaining the inherent advantages of fiber-optic gyros, such as excellent linearity and high adaptability to temperature and environmental changes.

Designed with a +5VDC power supply and industry-standard RS422 digital output, the AFG2321R simplifies integration into diverse systems. Its ITAR-free status eliminates export/import licensing complexities, making it ideal for global deployment. The gyro's robust construction ensures reliable performance under extreme conditions, including high shock (100g, 6ms) and vibration (18g).



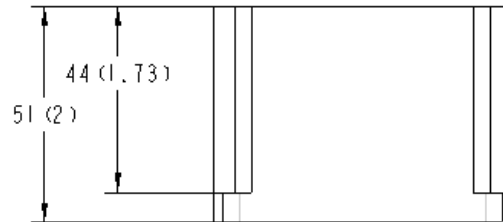
### SPECIFICATIONS

Table 1.

Parameter	Min.	Typ.	Max.	Unit/Note
Angular Velocity Range		±890		°/s
Zero-Bias Stability		≤0.3		°/h (10s, 1σ, 25°C)
Resolution		≤0.15		°/h
Scale Factor Error		≤200		ppm
Dynamic Bandwidth		≥1		kHz (3dB)
Operating Temperature	−45		+70	°C
Storage Temperature	−55		+85	°C
Power Consumption		≤6		W
Supply Voltage		+5		VDC
Weight		≤350		g
Dimensions		65×70×51		mm (L×W×H)
Mounting Holes		4-φ4.2		mm
Power consumption		≤6W		
Supply voltage		+5VDC		
Electrical interface	RS 422 Customizable			

### DIMENSIONS

**Outline Dimensions:** L65×W70×H51 (mm)



Top View	Side View
Bottom View	Unit: mm (inch)

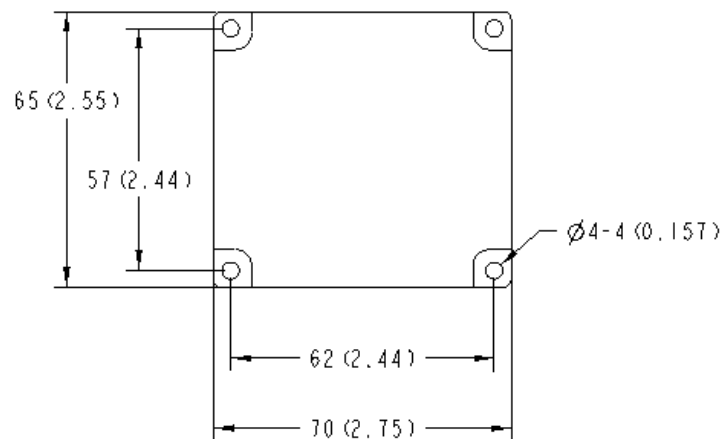


Figure 1. Outline Dimensions