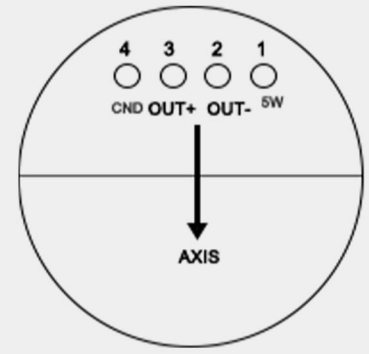
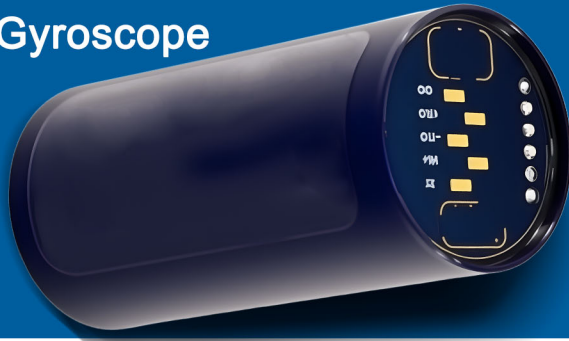


BSD-217

Fiber Optic Gyroscope



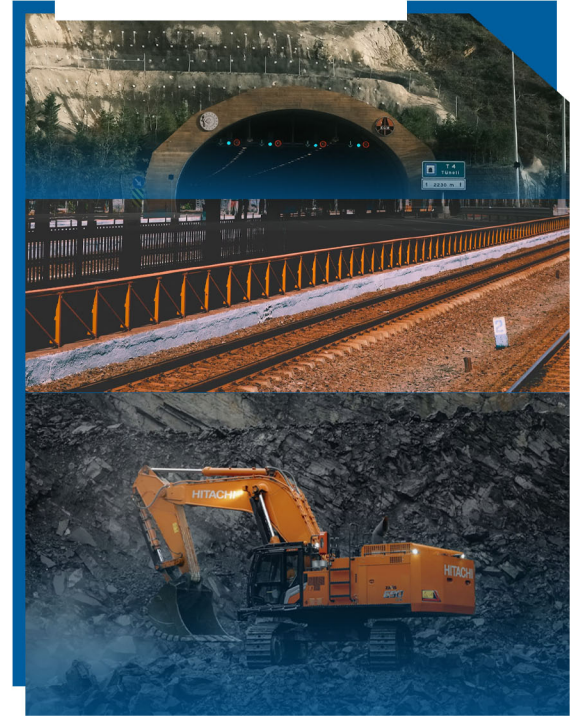
Features:

- * Zero bias stability: $\leq 2^\circ/h$
- * Small size: $\phi 24\text{mm} \times 39\text{mm}$, light weight: $\leq 30\text{g}$
- * Simple structure, no moving parts, no wearing parts, fast start-up, can be applied to carrier's attitude control and measurement

The BSD-217 fiber optic gyroscope is an angular rate sensor that integrates optical, mechanical, and electrical components. Based on the Sagnac effect, it integrates a variety of Micro-nano optical fiber devices, and realizes the detection process by detecting, processing, and feedback the phase difference generated by two beams of light propagating in opposite directions.

Applications of Miniature Cylindrical Gyroscopes

- ① Civil Engineering & Structural Monitoring
 - Bridge/Tunnel/Dam Tilt Measurement Real-time monitoring of structural deformation Early warning for landslides or foundation settlement.
 - Oil Well & Mining Shaft Alignment Detection of drill pipe inclination in vertical/horizontal wells.
- ② Industrial Machinery & Robotics
 - Crane/Tower Crane Anti-Tip System MEMS gyro-based load moment indicators (LMI)
 - Autonomous Mining Vehicles Dead reckoning in GPS-denied environments



Serial Number	Parameters	BSD-217	BSD-217-AN
1	Input Range ($^\circ/s$)	± 500	± 300
2	Scale Factor	3600 (LSB/o/s)	7mv/o/s
3	Scale Factor Non-linearity (ppm)	300	≤ 1000
4	Bias Stability (10s, $1\sigma, ^\circ/h$)	≤ 2	≤ 2.5
5	Bias Repeatability ($1\sigma, ^\circ/h$)	≤ 1.5	≤ 2
6	Angular Random Walk ($^\circ/h^{1/2}$)	≤ 0.03	≤ 0.04
7	Zero Bias ($^\circ/s$)	≤ 0.02	≤ 0.05
8	3dB Bandwidth (Hz)	≥ 300	≥ 450
9	Power Supply (V)	5 ± 0.15	$5 + 0.15$
10	Power Consumption (W)	≤ 1.5	≤ 0.7
11	Dimensions (mm)		$\phi 24 \times 39$
12	Magnitude of Random Vibration (g)		20
13	Frequency Range (Hz)		20-2000
14	Operating Temperature ($^\circ\text{C}$)		-40~+65
15	Storage Temperature ($^\circ\text{C}$)		-55~+85
16	Weight (g)		≤ 30