

Preliminary

Inertial Measurement Unit (IMU)

ITAR FREE

FI 180P

FIBERPRO FI 180P Fiber Optic Gyros (FOGs) is the world's smallest high performance FOGs that integrate three fiber optic gyros with three high-accuracy accelerometers, characterized by its excellent stability, environmentally sealed in rugged housing. The FI 180P provides digital data of incremental velocity and angular rate through Synchronous Data Link Control (SDLC) or Universal Asynchronous Receiver Transmitter (UART). The FI 180P uses low power consumption requiring single voltage at 5V and comes with versatile options to provide functions and upgrades for customers.



Features

- Small Size and Light Weight
- Gyro Bias Repeatability : $< 0.5^\circ/\text{hr}$
- Gyro Angle Random Walk : $< 0.025^\circ/\sqrt{\text{hr}}$
- Power Consumption : $< 8\text{W}$ ($5\text{W}@RT$)
- Operating Voltage : 5 V
- Weight
 - $< 600\text{ g}$ (non-Ring type)
 - $< 700\text{g}$ (with Ring Type)

Specifications

Performance				
Rate Sensor				
	Unit	FI 180P-A08	FI 180P-A15	FI 180P-A40
Operating Range	°/sec.	490	490	490
Bias Repeatability	°/hr	0.5	0.5	0.5
Scale Factor Accuracy	ppm	100	100	100
Angle Random Walk	°/√hr	0.025 (typ.)	0.025 (typ.)	0.025 (typ.)
Accelerometer				
Bias Repeatability	mg	1	1.3	1.5
Bias In-run Stability	mg	0.005	0.01	0.02
Scale Factor Accuracy	ppm	150	300	500
Acceleration Range	g	8	15	40
Electrical/Mechanical				
Supply Voltage	V	5		
Signal Input / Output		RS-422, SDLC		
Power Consumption	W	< 8W (5 W @RT) ¹⁾		
Data Rate	Hz	400 Hz (100, 200, 600, 1000 Hz Optional)		
Dimension (Non-Ring type)	mm	Ø 88.9 × 57 (H)		
Dimension (with Ring type)		Ø 127 × 57 (H)		
Temp. (Operating)	°C	- 40 ~ 71		
Weight (Non-Ring type)	g	< 600		
Weight (Ring type)		< 700		

1) < 8 W @ -40°C