



FIBERPRO

Fiber Optic Gyroscope Products



Single Axis Gyroscope [FG 150]



Inertial Measurement Unit [FI 200P]



Gyrocompass [FI 210G]



Inertial Measurement Unit (IMU)

FI 200C

High Performance Tactical Grade **FOG IMU** ITAR FREE



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LEA-FI 200C-03

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Inertial Measurement Unit (IMU)

FIBERPRO's FI 200C is a fiber optic-based Inertial Measurement Unit, which is small, lightweight and offers the highest performance / price ratio of its kind. FI 200C provides inertial data of incremental velocity and angular rate through digital format. Its low operating voltage and low power consumption provide one of the lowest ownership cost.

Applications

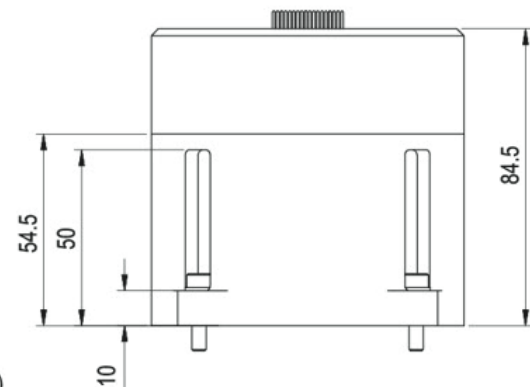
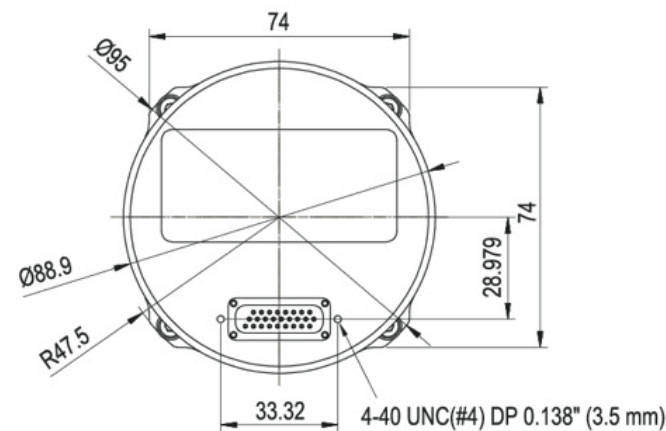
- Autonomous Underwater Vehicle
- Pipeline Inspection Gauge
- Remoted-operated Vehicle
- Motion Compensation
- Autonomous Vehicle
- Mining & Agriculture



FI 200C

Dimensions

(Unit : mm)



Specifications

Performance	
Rate Sensor	
Technology	Closed-loop FOG
Operating Range	$\pm 490^\circ/\text{sec}$
Bias Repeatability (over temp. range)	$\leq 0.5^\circ/\text{hr}$ (1σ , RMS)
In-run Bias Stability	$0.03^\circ/\text{hr}$ (typical, 1σ)
	$\leq 0.05^\circ/\text{hr}$ (max, 1σ)
Scale Factor Accuracy	≤ 100 ppm (1σ , RMS)
Scale Factor Non-linearity (full rate, 25°C)	≤ 20 ppm
Angle Random Walk	$0.025^\circ/\sqrt{\text{hr}}$ (typical, 1σ)
Axis Misalignment	≤ 100 μRad
Accelerometer ¹⁾	
Technology	MEMS
Operating Range	± 10 g
Bias Repeatability (over temp. range)	1.2 mg (1σ , RMS)
In-run Bias Stability	15 μg (typical, 1σ)
Scale Factor Accuracy	≤ 300 ppm (1σ , RMS)
Velocity Random Walk	0.015 m/s/ $\sqrt{\text{hr}}$ (typical, 1σ)
Axis Misalignment	≤ 200 μRad
Bandwidth	≥ 200 Hz (-3 dB)
Electrical/Mechanical	
Start-up Time	< 0.6 sec
Signal Input/Output	UART(RS-422), SDLC
Baud Rate (UART)	460.8 Kbps
Data Rate	100 / 400 / 600 / 1,000 Hz ^{2), 3)}
Input Voltage	+ 5 V
Power Consumption	5 W @ 25°C (< 8 W, @ - 40°C)
Dimensions	88.9 mm \varnothing \times 84.5 mm H (3.5" \varnothing \times 3.3" H, w/o connector)
Weight	790 g (1.74 lbs)
Environment	
EMC/EMI	MIL-STD-461F
Humidity	Up to 95 %
Low Pressure	1750 Pa, 30 min (@ 55,000 ft)
Temperature (operating)	- 40°C to + 71°C (- 40°F to 160°F)
Shock (MIL-STD-810G)	40 g, 11 msec, Sawtooth (operation)
Vibration (MIL-STD-810G)	7.7 g RMS (20 Hz to 2,000 Hz)

1) Replacement upon request

2) Select one data rate

3) In case of SDLC, 1,600 Hz is available

The specification and technical information contained herein are subject to change without notice and are furnished without charge or obligation. They are given and accepted at recipients sole risks.