

µFORS-1 / -36m FIBER OPTIC RATE SENSORS



LITEF's Fiber Optic Rate Sensor μ FORS is designed to meet the requirements of a wide range of air, land and sea applications.

Using the latest technology, it provides compensated angle or angular rate outputs via the asynchronous or the synchronous digital IBIS (Intelligent Bus for Inertial Sensors) interface.

With small volume, low weight and small power consumption, the $\mu FORS$ can be integrated into many applications, thereby reducing system complexity and cost.

Free from effects of gravity induced errors, and with no moving parts, LITEF's μ FORS is insensitive to shock and vibration. It offers high reliability without the need for periodic maintenance.

ADVANTAGES OF THE CLOSED LOOP PRINCIPLE:

- High dynamic range
- $\cdot\,$ High scale factor linearity
- $\cdot\,$ Excellent performance under high vibration levels

CUSTOMER ADVANTAGES OF THE µFORS:

- Integrated electronics
- · Standard digital interface
- Flexible, programmable digital interface (range, data rate, resolution etc.)
- · Output of temperature compensated data
- · Small size, low weight, low power consumption
- Low cost



TECHNICAL DATA $\mu\text{FORS-1}\,/\,\text{-36m}$

FIBER OPTIC RATE SENSORS

	μFORS-1	µFORS-36m
PERFORMANCE		
Range	± 1000 °/s	± 1500 °/s
Scale Factor Error - Repeatability (day to day)	≤ 0.05 % (1 ₀)	≤ 0.05 % (1 σ)
Bias Repeatability (day to day) - full temperature range - at stabilized temperature	≤ 1 °/h (1 Ծ) ≤ 1 °/h (1 Ծ)	≤ 36 °/h (1 σ) ≤ 18 °/h (1 σ)
Noise (Random Walk)	≤ 0.1 °/√h	≤ 1 °/√h
Initialization Time	≤ 120 ms	≤ 120 ms
Misalignment	± 10 mrad max	± 10 mrad max
ELECTRICAL CHARACTERISTICS		
Power Supply	± 5 VDC; + 3.3 VDC	± 5 VDC; + 3.3 VDC
Current Consumption	2.5 W max	2.25 W max
Connector	soldering pins	soldering pins
Data Interface serial asynchronous or serial synchronous	TTL / CMOS IBIS*	TTL / CMOS IBIS*
Data Rate asynchronous synchronous	5 1000 Hz (TTL) 5 8000 Hz (IBIS)	5 1000 Hz (TTL) 5 8000 Hz (IBIS)
PHYSICAL CHARACTERISTICS		
Size (H x W x L)	$22 \times 53 \times 78 \text{ mm}^3$	$21 \times 53 \times 58 \text{ mm}^3$
Weight	≤ 137 g	≤ 110 g
Housing	ruggedized, hermetically sealed	ruggedized, hermetically sealed
ENVIRONMENTAL CONDITIONS		
Temperature (operating)	– 40 °C + 77 °C	- 55 ℃ + 81 ℃
Vibration 30 min/axis operating	max 0.1 g²/Hz, 500 Hz 1 kHz	max 0.4 g²/Hz, 500 Hz 1 kHz
Shock operating	250 g; 4 ms	80 g; 1 ms

*based on CCITT 1431T1/E19

FOR MORE INFORMATION,	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L.	L.	L	L.	L	L.	L.	L							
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