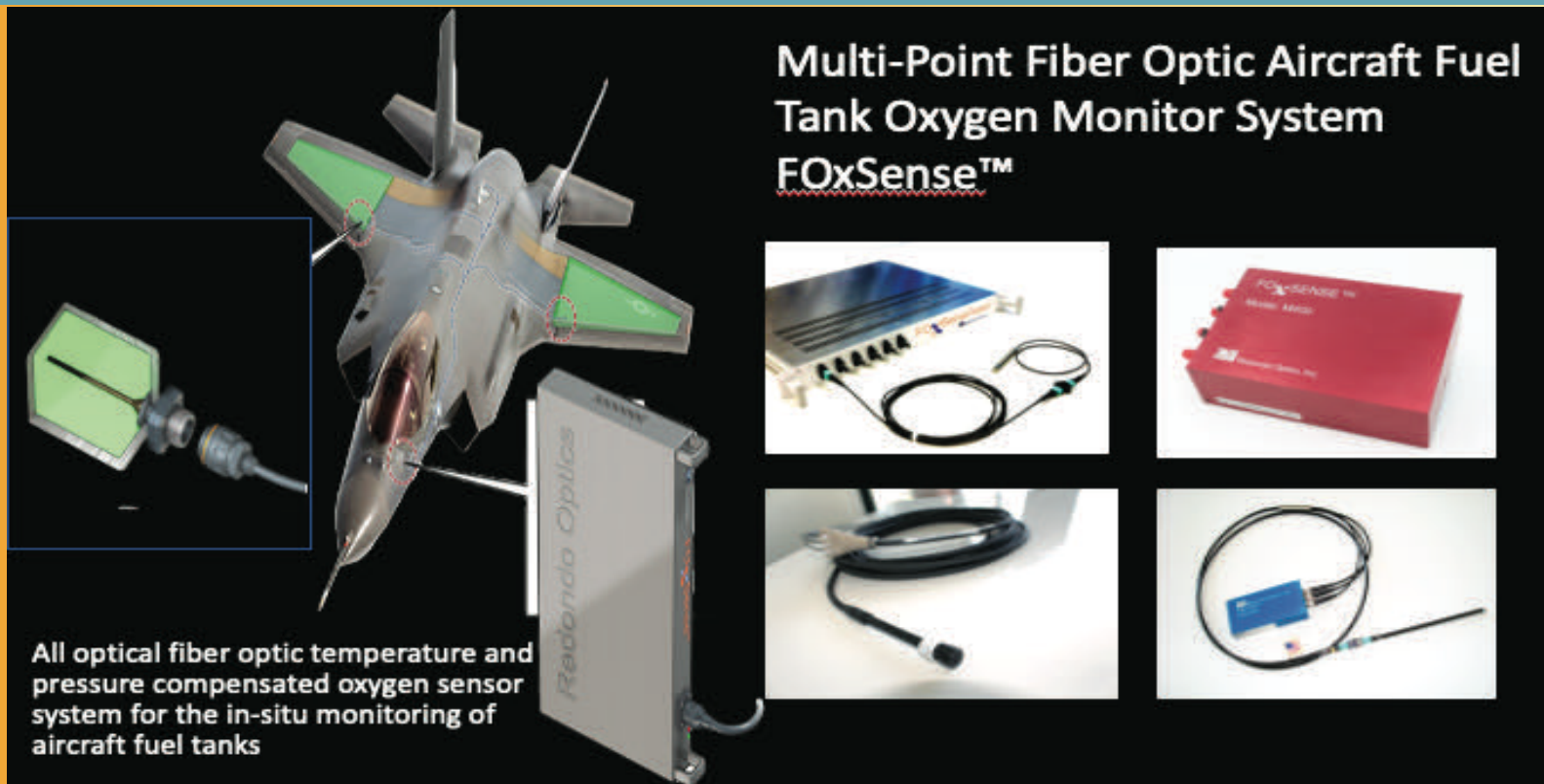




Redondo Optics, Inc.

Fiber Optic Aircraft Fuel Tank Oxygen Sensor Multi-Channel Fiber Optic Oxygen Sensor System

FOxSense™



**Multi-Point Fiber Optic Aircraft Fuel Tank Oxygen Monitor System
FOxSense™**

All optical fiber optic temperature and pressure compensated oxygen sensor system for the in-situ monitoring of aircraft fuel tanks

The FOxSense™ fiber optic sensor system is an all-optical self-reference, multi-point fiber optic oxygen monitor (FOxSense™) system, with built-in temperature and pressure compensation, suitable for the in-situ closed-loop monitoring and control of the oxygen concentration environment within all the fuel tanks of aircraft and rotorcraft.

The FOxSense™ system compact package, lightweight, low power operation, state-of-the art data processing, and plug-and-play architecture at affordable price makes it a very reliable and attractive solution for a large number of aircraft and rotorcraft applications, as well within the aerospace and defense, chemical and oil industry, and environmental monitoring.

FOxSense™ System Series Specifications

PARAMETER	O2	DO2	T	P
RANGE	0-100%	0-40 ppm	- 40°C to + 70°C	0.1 atm to 1.2-atm
RESPONSE TIME	< 0.1 second	< 0.1 second	< 0.1 second	< 0.1 second
RESOLUTION	0.05%	0.4 ppm	0.5°C	0.1-atm
ACCURACY	+/- 1% of reading	+/- 1% of reading	+/- 1% of reading	+/- 1% of reading
SENSITIVITY	0.05%	0.4-ppm	0.5 °C	0.1-atm
Operational Environment	Polar & Non-Polar Solvents	Polar & Non-Polar Solvents	NA	NA
TEMPERATURE SENSITIVITY	<0.1%/°C (compensated)	<0.1%/°C (compensated)	<0.1%/°C	<0.1%/atm
DRIFT	<0.01%/day	<0.01%/day	<0.01%/day	<0.01%/day

Model No.	M50	M400
Monitoring Mode	Frequency vs. Time	Frequency vs. Time
Fluorescence Lifetime Range	80 µsec - 800 nsec	100 µsec - 500 nsec
Modulation Frequency Range	20 kHz to 200 kHz	1 kHz to 300 kHz
Modulation Frequency Resolution	0.1 kHz	0.1 kHz
Excitation Source Type	LED or LD	LED or LD
Excitation Source Wavelength	250-nm to 850-nm	250-nm to 850-nm
Detector	Photodiode	PMT or APD
Emission Wavelength Selection	Optical Filter	Optical Filter
Remote Sensing	Fiber Bundle	Fiber Bundle
Fiber Optic Connector	Multimode-SMA	Multimode-SMA
Data Display	LabView Graphical Interface	LabView Graphical Interface
Data Communication	USB	USB
Power Supply	12V/500 mA	12V/500 mA

* Engineering specifications subject to change without prior notice

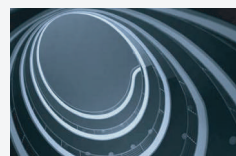
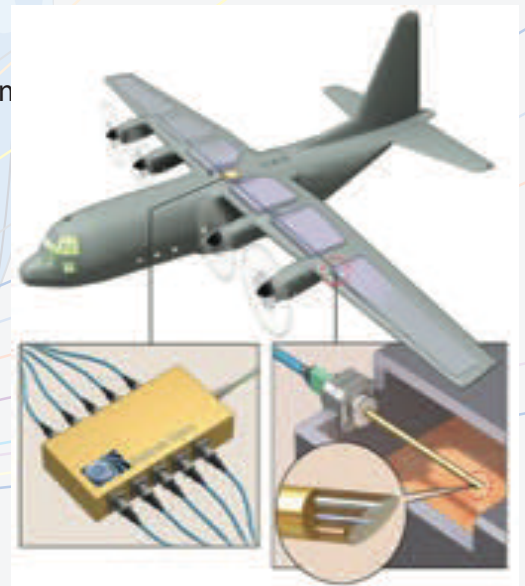
Key Features

- All optical multi-point fluorescence oxygen sensor system
- Fluorescence/Phosphorescence lifetime
- Fiber optic light excitation and emission collection
- Point and remote detection with milliseconds response

Redondo Optics' All-Optical FOxSense™ oxygen sensor system is based on measuring the light induced fluorescence lifetime of target fluorophores in response to the oxygen, temperature and pressure environment of the fuel-tanks of aircraft. The fluorescence lifetime is measured using the principle of "frequency-domain" "phase-locked" detection.

Contact Information

For further information on this or other products, please contact our sales department at (310) 406-1295 or e-mail sales@redondooptics.com.



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