



SOUND SOLUTIONS FROM LIGHT TECHNOLOGY



FOSA™ 1670

Fiber Optic Accelerometer for Extended Temperature Applications

Miniature fiber optic accelerometer for remote monitoring of vibration at high temperatures. Ideal where the accelerometer is a sub-component in another device or system. Similar to FOSA 1660, but more robust and with a larger footprint.

FEATURES

- ▶ Lightweight design
- ▶ Absolute EMI/RFI immunity
- ▶ Completely passive sensor with no electrical parts
- ▶ Exceptionally low noise density
- ▶ Model options suited to a variety of applications
- ▶ Standard analog output
- ▶ High reliability and environmental stability
- ▶ Optical fiber connection over extended lengths without signal loss
- ▶ Plug-and-play system
- ▶ Cost-effective, long-term solution

TECHNICAL SPECIFICATIONS

Model Options	Type 1	Type 2	Type 3
Frequency Response (±5%)	0.5-100 Hz	1-330 Hz	1-1000 Hz
Maximum Acceleration	3 g	20 g	80 g*
Noise Density (micro-g/√Hz)	<3	<30	<300
Nominal Sensitivity	100 mV/g		
Power Supply	8-15 V, 50 mA or 24 V, 50 mA		
Output Impedance	<100 Ohm		
Phase Shift	0 deg		
Amplitude Non-linearity	<5 %		
Transverse Sensitivity	<3 %		
Base Strain Sensitivity	0.0001 g/micro-m/m		
Temperature Range	-20 to +100 °C (-4 to +212 °F)		
MTBF	>100,000 hours		
Sensor Head			
Material	Polycarbonate		
Weight	3 g		
Dimensions D/H	10/30 mm		
Optical Cable Length	10 m		

* When paired with EOU 500

APPLICATIONS

- ▶ Power generation facilities
- ▶ Patient and machine monitoring in MRI scanning environments
- ▶ High voltage electrical areas
- ▶ Highly explosive areas
- ▶ High RF areas
- ▶ Severe electromagnetic fields
- ▶ Industrial equipment monitoring
- ▶ Aerospace measurements



FOSA™ 1670 System Kit

Complete, versatile, cost-effective solution

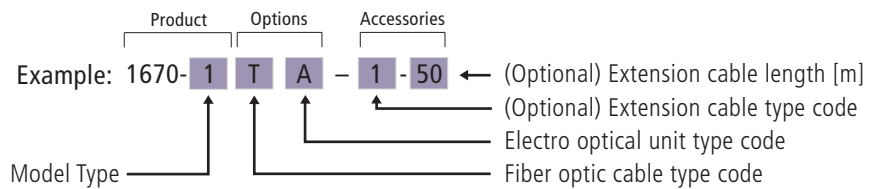
Optoacoustics' FOSA 1670 system is comprised of our advanced fiber optic accelerometer, electro-optical unit, output signal cable with BNC connector, DC power supply and a ruggedized carrying case.



Optoacoustics EOU 100 electro-optical unit showing fiber optic, output signal, and power supply connections

PRODUCT ORDERING GUIDE

Use the matrix below to select options and accessories for your order.



Options	Fiber Optic Cable Type		Electro-Optical Unit Type	
Item	Black Polyamide Ø 5.1 mm	Clear Teflon Ø 4 mm	EOU 100 Single Channel	EOU 500 Single Channel
Code	R	T	A	F

Accessories	Extension Cable Type (Specify length from 10-100 m)			
Item	Outdoor, Milspec Ø 5 mm	PVC Ø 5 mm	Indoor, Rugged Ø 3.0 mm	Indoor, Zip Cord Ø 3.0 x 2 mm
Code	1	2	3	4



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Optoacoustics is a leading manufacturer of high performance, optical fiber-based sound and vibration sensors. Each of our products combines the natural intelligence of optics and acoustics to meet technical performance demands which cannot be addressed by conventional sensing solutions. Optoacoustics' pioneering technology is protected by over 20 international patents.

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