Very High Temperature ICP® Accelerometer

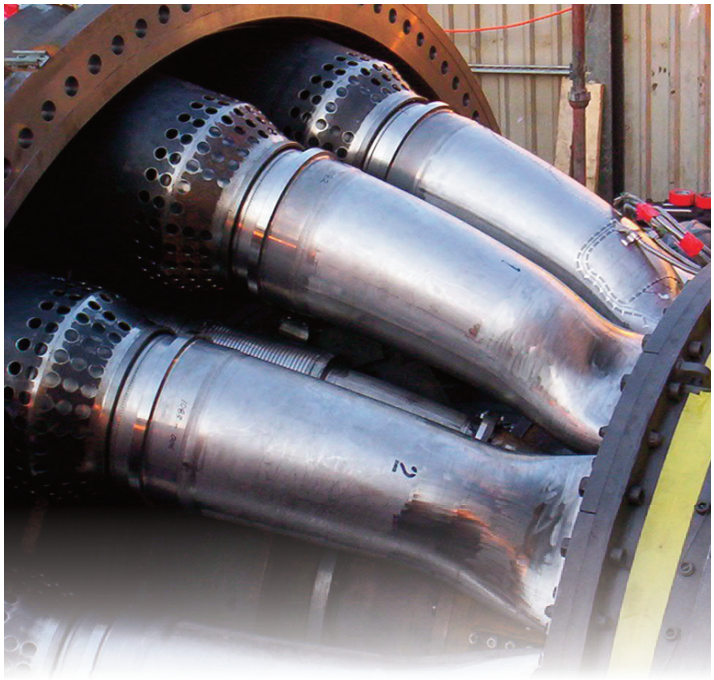
NEW!

An ICP® accelerometer kit designed to withstand that challenges of extreme temperatures as well as hazardous area applications

Series EX600B1X

IMI's Series EX600B1X features improved performance for dealing with transient temperature changes, a common condition in gas turbines. The integral sensor, cable, and charge amplifier are coupled in a single high-temperature accelerometer assembly eliminating contamination and common mode noise concerns Integrate with standard data acquisition equipment.

- One piece construction with hermetically sealed integral hardline cable
- Hazardous area approvals
- Multiple sensitivites available
- Withstands temperatures up to 900 °F (482 °C)



Typical Applications

- Gas Turbines Monitoring
- Steel Rolling & Annealing
- Power Generation

Kit Includes

- Side-exit, charge mode ICP® accelerometer
- Integral charge amplifier
- 10 ft integral hard-line cabling

IMI SENSORS
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visit us at www.imi-sensors.com ☎ Toll-Free in USA 800-959-4464 ☎ 716-684-0003

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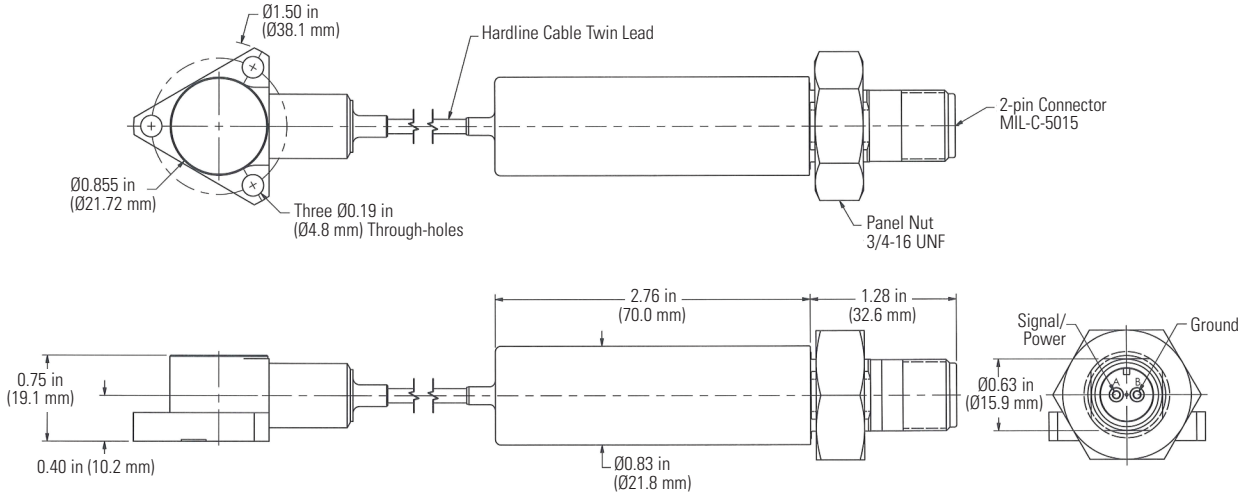

Technical Specifications

Model Number	EX600B13 [7][8][9][10]	EX600B14 [7][8][9][10]
Performance		
Sensitivity (± 5 %)	100 mV/g	10 mV/g
	10.2 mV/(m/s²) [2]	1.0 mV/(m/s²) [2]
Measurement Range	± 50 g pk	± 500 g pk
	± 490 m/s² pk	± 4,900 m/s² pk
Frequency Range (± 5 %)	282 to 210,000 cpm	
	4.7 to 3.5 kHz [3] [4]	
Frequency Range (± 10 %)	204 to 300,000 cpm	
	3.4 to 5 kHz	
Resonant Frequency	1,200 kcpm	
	20 kHz [1]	
Broadband Resolution (1 to 10 kHz)	450 µg	4,415 µm/sec² [2]
Non-linearity (per full scale range)	≤ 1 % [5]	
Transverse Sensitivity	≤ 5 %	
Environmental		
Overload Limit (Shock)	± 1,000 g pk	
	± 9,810 m/s² pk [2]	
Temperature Range (Accelerometer)	-65 to 900 °F	
	-54 to 482 °C	
Temperature Range (Charge Amplifier)	-60 to 250 °F	
	-51 to 121 °C	
Base Strain Sensitivity	≤ 0.006 g/µε	≤ 0.06 (m/s²)/µε [2]
Electrical		
Settling Time (@ 70 °F within 1% bias)	≤ 1.0 sec	
Discharge Time Constant	≥ .10 sec	
Excitation Voltage	22 to 28 VDC	
Constant Current Excitation	2.2 to 20 mA	
Output Impedance	<1,000 ohm [1]	
Output Bias Voltage	12 to 16 VDC	

Model Number	EX600B13 [7][8][9][10]	EX600B14 [7][8][9][10]
Electrical (Continued)		
Spectral Noise (10 Hz)	30 µg/√Hz	
	294 (µm/sec²)/√Hz [1][2]	
Spectral Noise (100 Hz)	8 µg/√Hz	
	78 (µm/sec²)/√Hz [1][2]	
Spectral Noise (1 kHz)	4 µg/√Hz	
	39 (µm/sec²)/√Hz [1][2]	
Electrical Isolation (Case)	>10⁸ ohm	
Physical		
Size (Diameter x Height)	1.5 in x 0.75 in	
	38.1 mm x19.1 mm	
Weight (without cable)	9.5 oz	
	270 gm	
Electrical Connector	2-pin MIL-C-5015	
Cable Length	10 ft	
	3 m	
Cable Type	Integral Hardline	
Mounting	Through Holes (3)	
Supplied Accessories		
	Model 081A99 Cap Screw (3) Model ICS-1 NIST-traceable single-axis amplitude response calibration from 600 cpm (10 Hz) to upper 5% frequency (1)	

Notes

All specifications are at room temperature unless otherwise specified

[1] Typical
[2] Conversion Factor 1g = 9.81 m/s²
[3] 1Hz = 60 cpm (cycles per minute)
[4] The high frequency tolerance is accurate within ±10% of the specified frequency.
[5] Zero-based, least-squares,straight line method
[6] For CE reference PCB® Declaration of Conformance PS023 for details
[7] Class I, Div. 1, Groups A, B, C and D; Class II, Div. 1, Groups E, F and G; Class III, Div. 1
[8] Class I, Div. 1, Groups A, B, C, D
[9] Ex ia IIC T4
[10] Ex nL IIC T1, II 3 G

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ISO 9001 CERTIFIED ■ A2LA ACCREDITED to ISO 17025

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IMI Sensors designs and manufactures a full line of accelerometers, sensors, vibration switches, vibration transmitters, cables and accessories for predictive maintenance, continuous vibration monitoring, and machinery equipment protection. Products include rugged industrial ICP® accelerometers, 4-20 mA industrial vibration sensors and transmitters for 24/7 monitoring, electronic and mechanical vibration switches, the patented Bearing Fault Detector, high temperature accelerometers to +900 °F (+482 °C), 2-wire Smart Vibration Switch, and the patented Reciprocating Machinery Protector. CE approved and intrinsically safe versions are available for most products.

Visit **www.imi-sensors.com** *to locate your nearest sales office*