

Model Number
SEN027

TRIAxIAL ICP® SEAT PAD ACCELEROMETER

Revision: C

Performance

	ENGLISH	SI	Notes
Voltage Sensitivity ($\pm 10\%$)	100 mV/g	10.2 mV/(m/s ²)	
Measurement Range	± 10 g pk	± 98 m/s ² pk	
Frequency Range ($\pm 5\%$)	0.5 to 1000 Hz	0.5 to 1000 Hz	[2]
Resonant Frequency	≥ 27 kHz	≥ 27 kHz	
Broadband Resolution (1 to 10000 Hz)	0.0002 g rms	0.002 m/s ² rms	[1]
Non-Linearity	$\leq 1\%$	$\leq 1\%$	[3]
Transverse Sensitivity	$\leq 5\%$	$\leq 5\%$	

Environmental

	ENGLISH	SI	Notes
Overload Limit (Shock)	± 2000 g pk	± 19620 m/s ² pk	
Temperature Range (Operating)	-10 to +122 °F	-23 to +50 °C	
Temperature Response	< 0.10 %/°F	< 0.17 %/°C	[1]

Electrical

	ENGLISH	SI	Notes
Excitation Voltage	6.5 to 30 VDC	6.5 to 30 VDC	
Constant Current Excitation	0.3 to 10 mA	0.3 to 10 mA	
Output Impedance	≤ 500 Ohms	≤ 500 Ohms	
Output Bias Voltage	2.8 to 4.5 VDC	2.8 to 4.5 VDC	
Discharge Time Constant	1 to 3 s	1 to 3 s	
Settling Time (within 10 % of bias)	< 20 s	< 20 s	
Spectral Noise (1 Hz)	50 μ g/ $\sqrt{\text{Hz}}$	490 ($\mu\text{m/s}^2$)/ $\sqrt{\text{Hz}}$	[1]
Spectral Noise (10 Hz)	10 μ g/ $\sqrt{\text{Hz}}$	98 ($\mu\text{m/s}^2$)/ $\sqrt{\text{Hz}}$	[1]
Spectral Noise (100 Hz)	4 μ g/ $\sqrt{\text{Hz}}$	39 ($\mu\text{m/s}^2$)/ $\sqrt{\text{Hz}}$	[1]
Spectral Noise (1 kHz)	2 μ g/ $\sqrt{\text{Hz}}$	20 ($\mu\text{m/s}^2$)/ $\sqrt{\text{Hz}}$	[1]

Physical

	ENGLISH	SI	Notes
Sensing Element	Ceramic	Ceramic	
Sensing Geometry	Shear	Shear	
Housing Material	Titanium	Titanium	
Sealing	Hermetic	Hermetic	
Size (Diameter x Width)	7.87 x 0.472 in	200 x 12 mm	
Weight	9.6 oz	272 gm	[1]
Electrical Connector	Integral Cable	Integral Cable	
Electrical Connector Position	Side	Side	
Cable Termination	¼-28 4-Pin Jack	¼-28 4-Pin Jack	
Cable Length	5 ft	1.5 m	
Cable Type	010 4-cond Shielded	010 4-cond Shielded	
Mounting Thread	5-40 Female	5-40 Female	



Notes

- [1] Typical
- [2] Standard calibration to 100 Hz with sensor in mounting pad. Special calibration above 100 Hz available with sensor outside mounting pad
- [3] Zero-based, least-square, straight line method

Supplied Accessories

NIST Traceable Calibration Certificate



All specifications are at room temperature unless otherwise specified
In the interest of constant product improvement, we reserve the right to change specifications without notice.
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