

Model Number
9105C01

SINGLE-ENDED VERIFICATION TRANSFER STANDARD ACCELEROMETER SYSTEM

Revision: A
ECN #:

PERFORMANCE

	<u>English</u>	<u>SI</u>	
Sensitivity (±5%)	10 mV/g	1.02 mV/(m/s ²)	
Measurement Range	± 500 g pk	± 4905 m/s ² pk	
Frequency Range (±5%)	1 to 7000Hz	1 to 7000 Hz	
Frequency Range (±10%)	0.7 to 11,000 Hz	0.7 to 11,000 Hz	
Resonant Frequency	≥ 38 kHz	≥ 38 kHz	
Broadband Resolution (1 to 10000 Hz)	0.003 g rms	0.03 m/s ² rms	[1]
Non-Linearity (+/-40g)	≤0.08 %	≤0.08 %	[2]
Non-Linearity (Full Scale Output)	≤1 %	≤1 %	[2]
Transverse Sensitivity	≤3 %	≤3 %	

ENVIRONMENTAL

Overload Limit (Shock)	± 10,000 g pk	± 98,100 m/s ² pk	
Temperature Range (Operating)	-65 to +250 °F	-54 to +121 °C	
Temperature Response	See Graph	See Graph	[1]

ELECTRICAL

Excitation Voltage	18 to 30 VDC	18 to 30 VDC	
Constant Current Excitation	2 to 20 mA	2 to 20 mA	
Output Impedance	≤100 ohm	≤100 ohm	
Output Bias Voltage	8 to 12 VDC	8 to 12 VDC	
Discharge Time Constant	0.5 to 2.6 sec	0.5 to 2.6 sec	
Setting Time (Within 10% of Bias)	<5 sec	<5 sec	
Spectral Noise (1 Hz)	2800 µg/√Hz	27,468 (µm/sec ²)/√Hz	[1]
Spectral Noise (10 Hz)	700 µg/√Hz	6867 (µm/sec ²)/√Hz	[1]
Spectral Noise (100 Hz)	180 µg/√Hz	1766 (µm/sec ²)/√Hz	[1]
Spectral Noise (1 kHz)	64 µg/√Hz	628 (µm/sec ²)/√Hz	[1]

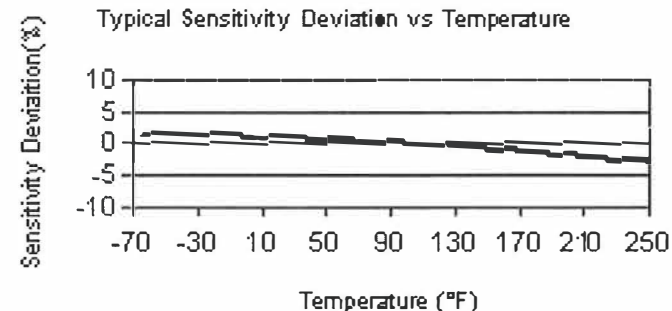
PHYSICAL

Sensing Element/Geometry	Quartz/Shear	Quartz/Shear	
Housing Material	Titanium	Titanium	
Sealing	Welded Hermetic	Welded Hermetic	
Size (Hex x Height)	0.50 in x 0.81 in	12.7 mm x 20.6 mm	
Weight	0.38 oz	10.5 gm	[1]
Electrical Connector	10-32 Coaxial Jack	10-32 Coaxial Jack	
Electrical Connector Position	Side	Side	
Mounting Thread	10-32 Female	10-32 Female	

ICP® SIGNAL CONDITIONER

Voltage Gain (±1%)	1:1	1:1	
Low Frequency Response (-5%)	<0.1 Hz	<0.1 Hz	
Universal Input Power	100-240 VAC; 50-60 Hz	100-240 VAC; 50-60 Hz	[3]
Discharge Time Constant (0 to +50%)	10 sec	10 sec	[4]
Electrical Connectors (Input, Output)	BNC Jack	BNC Jack	

All specifications are at room temperature unless otherwise specified.



LASER PRIMARY CALIBRATION UNCERTAINTY

MCS-A065 Primary calibration with K394A31 airbearing shaker.
Calibration data acquired from 5 to 11kHz at 10 pts/decade plus 159 Hz.

Expanded uncertainties using a coverage factor of k=2:

5 Hz	1%
(5 < f < 100) Hz	0.5%
100 Hz, 159 Hz	0.2%
(159 < f < 1000) Hz	0.5%
(1000 < f < 5000) Hz	0.7%
(5000 < f < 11000) Hz	1.5%

f represents calibration frequency

NOTES

- [1] Typical.
- [2] Zero-based, least squares, straight line method.
- [3] Supplied external DC power supply 488B04.
- [4] With ≥ 1M ohm input impedance of readout device.

SUPPLIED ACCESSORIES

- 003C03 Sensor Cable (1)
- 012A03 Output Cable (1)
- 081B05 Mnt Stud (10-32 to 10-32) (1)
- 081A08 Mnt Stud (10-32 to ¼-28) (1)
- MCSA065 Primary Calibration 5-11 kHz (1)
- ACS-14 Transverse Sensitivity Calibration
- MCS-46 Linearity Calibration Certificate

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In the interest of constant product improvement, specifications may change without notice.

Project Engineer: <i>[Signature]</i>	Product Manager: <i>[Signature]</i>	Mkt Team Leader: <i>[Signature]</i>	Spec Number: PS-0083
Date: <i>7/18/11</i>	Date: <i>4/23/11</i>	Date: <i>7/28/11</i>	

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