

Model Number  
**9105C11**

# PRIMARY SINGLE-ENDED TRANSFER STANDARD ACCELEROMETER SYSTEM

Revision: A  
ECN #:

**PERFORMANCE**

	<u>English</u>	<u>SI</u>	
Sensitivity (±20%)	11 mV/g	1.12 mV/(m/s <sup>2</sup> )	
Measurement Range	±500 g pk	±4905 m/s <sup>2</sup> pk	
Frequency Range (±5%)	2 to 10000 Hz	2 to 10000 Hz	
Frequency Range (3 dB)	2 to 20000 Hz	2 to 20000 Hz	
Resonant Frequency	≥60 kHz	≥60 kHz	
Broadband Resolution (1 to 10000 Hz)	0.005 g rms	0.05 m/s <sup>2</sup> rms	[1]
Non-Linearity	≤1 %	≤1 %	[2]
Transverse Sensitivity	≤5 %	≤5 %	[3]

**ENVIRONMENTAL**

Overload Limit (Shock)	±10000 g pk	±98100 m/s <sup>2</sup> pk	
Temperature Range (Operating)	-65 to +250 °F	-54 to +121 °C	
Temperature Response	See Graph	See Graph	[1]

**ELECTRICAL**

Excitation Voltage	20 to 30 VDC	20 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	0.3 to 2.0 sec	0.3 to 2.0 sec	
Setting Time (Within 10% of Bias)			
Spectral Noise (1 Hz)	3200 µg/√Hz	31392 (µm/sec <sup>2</sup> ) /√Hz	[1]
Spectral Noise (10 Hz)	700 µg/√Hz	6867 (µm/sec <sup>2</sup> ) /√Hz	[1]
Spectral Noise (100 Hz)	180 µg/√Hz	1766 (µm/sec <sup>2</sup> ) /√Hz	[1]
Spectral Noise (1 kHz)	64 µg/√Hz	628 (µm/sec <sup>2</sup> ) /√Hz	[1]

**PHYSICAL**

Sensing Element/Geometry	Quartz/Shear	Quartz/Shear	
Housing Material	Titanium	Titanium	
Sealing	Welded Hermetic	Welded Hermetic	
Size (Hex x Height)	0.5 in x 0.64 in	12.7 mm x 16.3 mm	
Weight	0.22 oz	6.2 gm	[1]
Electrical Connector	2-Pin Solder	2-Pin Solder	[6]
Electrical Connector Position	Side	Side	
Mounting Thread	10-32 Female	10-32 Female	

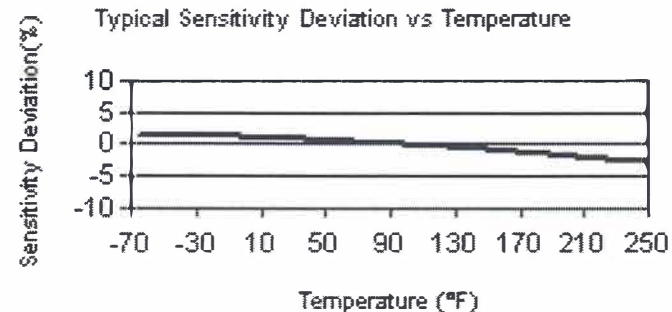
**ICP® SIGNAL CONDITIONER**

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	[4]
Discharge Time Constant (0 to +50%)	10 sec	10 sec	[5]
Electrical Connectors (Input, Output)	BNC Jack	BNC Jack	

*All specifications are at room temperature unless otherwise specified.*

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



**LASER PRIMARY CALIBRATION UNCERTAINTY**

MCS-A065 calibration using K394A31 airbearing shaker with data acquired from 5 to 20 kHz 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 ≤ 15000) Hz	1.5%
(15 000 < f ≤ 20000) Hz	2.0%

f represents calibration frequency

**NOTES**

- [1] Typical.
- [2] Zero-based, least squares, straight line method.
- [3] Transverse sensitivity is typically ≤ 3%.
- [4] Supplied external DC power supply 488B04.
- [5] With ≥ 1M ohm input impedance of readout device.
- [6] Includes 10' cable terminating in 10-32.

**SUPPLIED ACCESSORIES**

- 070A02 Scope input adaptor (10-32 jack to BNC plug) (1)
- 012A03 Output Cable (1)
- 081B05 Mnt Stud (10-32 to 10-32) (1)
- 081A08 Mnt Stud (10-32 to 1/4-28) (1)
- MCS-A065 Primary Cal 5 Hz- 20 kHz (1)

Project Engineer:

*[Signature]*

Date: 3/7/12

Product Manager:

ETS

Date: 3/7/12

Mkt Team Leader:

*[Signature]*

Date: 3/7/12

Spec Number:

**PS-0084**



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SAM-F020 revNR 04/04/03