

**Calibration Certificate** *SIA***Accelerometer System**

Accelerometer Model 8076K

TYPE ~~8076K~~ SN C106761

Amplifier/Coupler Model 5020

SN C34162

Range  $\pm$  250 g\*Sensitivity at 100 Hz, 10 g\*rms 10.00 mV/g\*  
at Hz, g\*rmsMounted Resonant Frequency 37.3 kHz *159.15*

Transverse Sensitivity 2.0 %

*.010498*Mounting Torque  $24 \pm 2$  lbf-in ( $2.7 \pm 0.2$  Nm)

All measurements at ambient conditions of 21°C (70°F) and 50% R.H.

\*g = 9.807 m/s<sup>2</sup>✓ Frequency Response *159.15*

Frequency (Hz)	20	50	100	200	500	1k	2k	5k	8k	10k
Deviation (%)	-0.9	-0.1	+0.0	-0.1	-0.4	-0.1	+0.1	+0.4	-0.3	-0.7

This accelerometer was calibrated using a back-to-back comparison technique against a Kistler Working Standard. Kistler Working Standards are periodically calibrated against a Kistler Reference Standard System

*±0.06%* which in turn is periodically recertified by the National Institute of Standards and Technology. The calibration of all Kistler acceptance test instrumentation is in conformance with MIL-STD-45662A.

## NIST Traceability

	Working Standard		Reference Standard	
Accelerometer	Model 8002K	SN C28623	Model 808K1	SN 1263
Charge Amplifier	Model 5020	SN C31242	Model 561T	SN 251

NIST Test Report Number 822/250337

AUG 15 1996

By Mark Thomas

Date 08-15-96

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Certificate of Conformance



calibration date

8/19/98

### Calibration Data: Room Temperature

Zero-G Voltage 

3.200
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Sensitivity 

0.011
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Part Number 

CXL100HF1Z
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Serial Number 

9711149
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Options: 

AC Coupled, min freq: 0 Hz
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#### Wiring Diagram:

Color	Pin	Function
Red	1	5 Vdc
Black	2	Ground
Green	5	Sensor

Thank you for choosing a Crossbow sensor. This worksheet is designed to help you get started. Refer to the product data sheet for more complete information.

#### Definitions

**Zero-G Voltage** : This number is the output voltage of the sensor with zero applied acceleration measured at the factory on the day of the calibration.

**Sensitivity** : This number is the sensor's sensitivity in Volts per G. One G is approximately 9.8 meters per second squared.

#### Calibration

The simplest method of field calibration is to record the sensor's output voltage when exposed to the Earth's gravitational field. Expose the sensor to +1G to obtain a more positive reading than the zero-G voltage. Expose the sensor to -1G to obtain a more negative reading than the zero-G voltage. The offset is defined as the average of the +1G and -1G voltages. The sensitivity in Volts per G is one-half the difference of the +1G and -1G voltages. Please note that this technique only works on DC coupled sensors. If your sensor is AC coupled, a shaker is required for proper calibration.

#### Technical Support

For further technical assistance, contact Crossbow Technology.

Crossbow Technology, Inc.  
41 East Daggett Drive

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