

AIS 81C5

Piezoresistive Accelerometer Uniaxial, flat form, Stainless Steel

Features

The Model AIS 81C5 Accelerometer is a small, compact uniaxial device designed for vehicle impact and road testing. Featuring ranges from $\pm 50\text{g}$ to $\pm 6000\text{g}$ and high frequency response, this sensor is easily mounted in hard to get places on vehicles under test.

The sensor provides a millivolt output signal and features mechanical overload stops that provide shock protection to loads greater than 10,000g. The electrical signal changes proportional to introduced vibration.

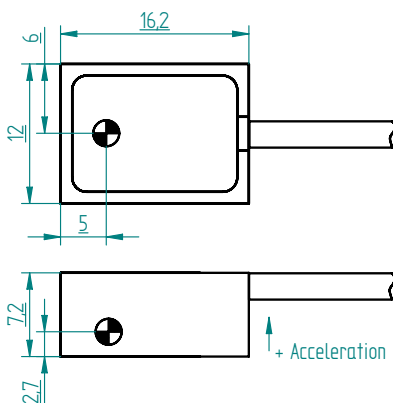
- ☐ Advanced MEMS Sensing Element
- ☐ Wheatstone Bridge
- ☐ Specification SAE J211
- ☐ Ranges $\pm 50\text{g}$ to $\pm 6000\text{g}$
- ☐ $\pm 25\text{mV}$ Zero Measurement Output typ.
- ☐ 2–10 VDC Excitation
- ☐ Gas Damping
- ☐ Mechanical Overload Stops
- ☐ Adhesive Mounting
- ☐ Low Cost

Applications

- ☐ Crash Testing
- ☐ Vibration & Shock Monitoring
- ☐ Impact Testing
- ☐ Road Testing
- ☐ Transportation Testing

Service

- ☐ Sinusoidal Calibration
- ☐ Pendulum Calibration
- ☐ Connector Options
- ☐ Signal Conditioning
- ☐ Repair Options
- ☐ ID-Module Options



AIS 81C2 Piezoresistive Accelerometer / uniaxial, flat form, Stainless Steel

Individual Technical Data All values are typical at +24°C and 5VDC excitation

AIS 81C2				
Range (g)	Sensitivity ¹ (mV/g)	Frequency Response (±5%) (Hz)	Damping Ratio ³	Shock Limit ² (g)
±50	1.0	0 – 600	0.40 – 0.9	10,000
±100	0.5	0 – 800	0.40 – 0.9	10,000
±200	0.4	0 – 1000	0.20 – 0.6	10,000
±500	0.2	0 – 1200	0.20 – 0.6	10,000
±2000	0.08	0 – 2500	0.05 – 0.3	10,000
±6000	0.05	0 – 3000	0.05 – 0.3	10,000

1) Output is ratiometric to excitation voltage, signal conditioning optional

2) 10,000g shock limit in normal axis, 5,000g in transverse axes

3) Damping behavior varies with cable, mounting or gluing

General Technical Data

AIS 81C2 Performance		
Supply Voltage	(VDC)	2 to 10
Ranges	(g)	50 to 6000
Non-Linearity typ.	(%)	±1% FSO / ±2% FSO for ±6000 g
Transverse Sensitivity	(%)	<3
Zero Acceleration Output (differential) typ.	(mV)	±25
Input and Output Resistance	(Ω)	2400 – 6500
Thermal Zero Shift typ.	(%FSO/°C)	-0.09
Thermal Sensitivity Shift typ.	(%/°C)	-0.15
Operating Temperature	(°C)	-20 to 90
Storage Temperature	(°C)	-40 to 100
Weight Housing	(g)	3
Cable	(g/m)	nom. 6,5, 87 Shore A, Polyurethane
Material Housing		Stainless Steel

Order Information			
AIS 81C5-XXX-XXX			
1	2	3	
1 Model			
2 Range			
3 Cable Length and Pinout			

Cable Code	
Supply +	Red
Supply -	Black
Output +	Green
Output -	White

