

AIS 8112

Piezoresistive Accelerometer Uniaxial, flat form



Features

The Model AIS 8112 Accelerometer is a compact, factory calibrated uniaxial device based on piezoresistive technology. Its housing has a flat design for adhesive mounting. Due to its low mass this model is perfect for testing light weight structures. Ranges from $\pm 50\text{g}$ to $\pm 200\text{g}$ and high frequency response, this sensor provides a millivolt signal. Signal amplified versions are optional. The sensing element has integrated overload stops which guarantees high shock performance.

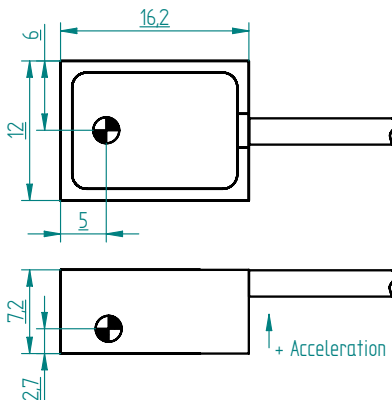
- ☐ Advanced MEMS Sensing Element
- ☐ Wheatstone Bridge
- ☐ DC Response, Gas Damping
- ☐ Ranges $\pm 50\text{g}$ to $\pm 200\text{g}$
- ☐ $\pm 25\text{mV}$ Zero Measurement Output typ.
- ☐ 2–10VDC Excitation
- ☐ 0–1400Hz Bandwidth
- ☐ Mechanical Overload Stops
- ☐ Adhesive Mounting
- ☐ Signal Amplified

Applications

- ☐ Embedded Applications
- ☐ Vibration & Shock Monitoring
- ☐ Impact Testing
- ☐ Machinery
- ☐ Instrumentation

Service

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



AIS 8112 Piezoresistive Accelerometer / uniaxial, flat form

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

AIS 8112				
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

- 1) Output is ratiometric to excitation voltage
Signal conditioning optional
Calibration data incl.: sensitivity at 80Hz / 5Vdc, offset, bridge resistance
- 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 8112 Performance		
Supply Voltage	(VDC)	2 to 10
Ranges	(g)	50 to 200
Non-Linearity typ.	(%)	±1% FSO
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)	4
Cable	(g/m)	nom. 6,5, 87 Shore A, Polyurethane
Material Housing		Aluminium

Order Information			
AIS 8112-XXX-XXX			
1	2	3	
1 Model			
2 Range			
3 Cable Length and Pinout			

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

