

A545

Multi Axis Series

DC-Operated, Bi-axial & Tri-axial
Linear Accelerometer



Features

- Ranges $\pm 2g$ to $\pm 50g$
- Integral overload protection
- Critical damping ratio 0.7 nominal for 2g, 5g, 10g & 20g versions (0.6 for 50g) with essentially zero temperature coefficient
- Integral temperature compensation
- DC input - DC output
- Suitable for DC and AC acceleration applications
- Available in 2 and 3 axis versions

Benefits

- Compact size
- Wide temperature range -40 to $+105$ °C
- Low weight 40 grams

Applications

Data acquisition
Systems

Railways

Crash recorders

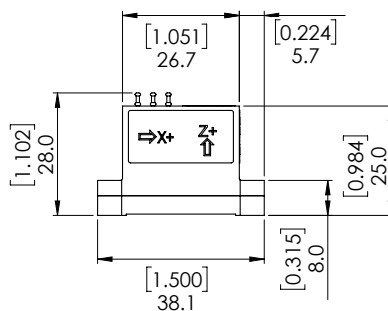
Simulators

Road bed analysis

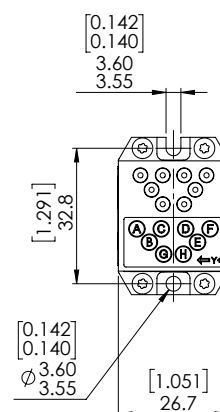
Electrical Connections

Pin A	+ dc excitation
Pin B	0V dc excitation
Pin C	- Signal 'X' axis
Pin D	+ Signal 'X' axis
Pin E	- Signal 'Y' axis
Pin F	+ Signal 'Y' axis
Pin G	- Signal 'Z' axis (option)
Pin H	+ Signal 'Z' axis (option)

SIDE VIEW



PLAN VIEW



Specifications

Specifications by Range @ 25°C

		± 2g	± 5g	± 10g	± 20g	± 50g
Output Impedance	Ω (max)			1.2 to 6.5		
Output Noise	V rms (max)			10		
Non-linearity (see note 2)	% FRO (max)			±0.5		
Hysteresis	% FRO (max)			0.02		
Resolution	% FRO (min)			0.0005		
Cross-axis Sensitivity (see note 3)	% FRO (max)			±1		
Zero Offset (see note 4)	mV			±2		
Damping Ratio				0.7 (±0.2)		
Thermal Zero Shift	%FRO/°C (max)			±0.02		
Thermal Sensitivity Shift	%Reading/°C (max)			±0.02		
Weight	grams (max)			40		

Electrical

Input Voltage	Volts dc	5.00 ± 0.01 Regulated to 8ppm/V (Max)
Input Current	mA dc (max per axis)	5

Environmental Characteristics

Operating Temperature Range	°C	-40 to 105
Compensated Temperature Range	°C	0 to 50
Storage Temperature Range	g	-55 to 130
Insulation Resistance	MΩ (@50V dc)	20

Notes

1. Full Range Output (FRO) is defined as the full acceleration excursion from positive to negative, i.e. ±2g = 4g
2. Non-linearity is determined by the method of least squares
3. Cross-axis sensitivity is the output of unit when subjected to full range acceleration in cross-axis
4. Zero offset is specified under

Model Designation & Ordering Code

A 5 4 5 - 0 0 0 □ - □ g

2 Dual-axis (X & Y) — }
 3 Tri-axis (X, Y & Z) — } g Range