

# A545 Series

**DC-Operated, Single Axis  
Linear Accelerometer**



## Features

- Ranges  $\pm 2g$  to  $\pm 50g$
- Essentially zero temperature coefficient of damping ratio
- Integral temperature compensation
- DC input - DC output
- High reliability

## Benefits

- Compact size
- Wide temperature range  $-40$  to  $+105\text{ }^{\circ}\text{C}$
- Low weight 40 grams

## Applications

Data acquisition  
Systems

Crash recorders

Road bed analysis

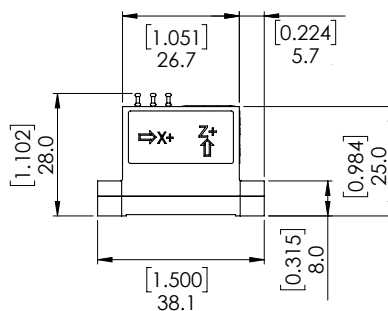
Railways

Simulators

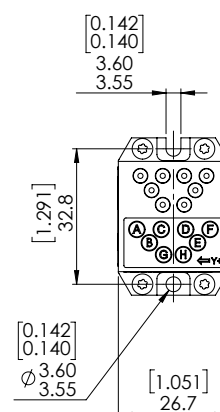
## Electrical Connections

Pin A	+ dc excitation
Pin B	0V dc excitation
Pin C	- Signal
Pin D	+ Signal
Pin E	Not connected
Pin F	Not connected

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)	Volts dc (max)			±2		
Damping Ratio				0.7 (±0.2)		
Thermal Zero Shift	%FRO/°C (max)			±0.02		
Thermal Sensitivity Shift	%Reading/°C (max)			±0.02		
Sensitive Axis Alignment				Vertical to mounting face		
Weight	grams (max)			40		

### Electrical

Input Voltage	Volts dc	14.5 to 27
Input Current	mA dc (max)	5

### Environmental Characteristics

Operating Temperature Range	°C	-40 to 105
Compensated Temperature Range	°C	0 to 50
Storage Temperature Range	g	-55 to 130
Humidity/Immersion		IP65
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.  $\pm 2g = 4g$
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 1 -  g  
└─ g Range