

MODEL 3038 ACCELEROMETER

Excellent durability with hermetic seal

Easy installation with SMD design

Over-range protection for up to 10,000 g shock loads

Long-term measurement stability

Designed for application durability in extreme temperature, vibration and shock environments, TE Connectivity's (TE) Model 3038 accelerometer delivers the performance you need.

The Model 3038 helps improve sensing confidence and allows for simple installation with a hermetically sealed SMD design. It incorporates a gas-damped piezoresistive MEMS sensing element providing outstanding long-term stability. With a millivolt output signal and mechanical overload stops that provide shock protection to loads greater than 10,000g, this sensor offers excellent value for performance.

FEATURES

- ±50g to ±6,000g Dynamic Ranges
- Board Mountable Accelerometer
- Low Power Consumption
- Hermetic LCC Package
- DC Response, Gas Damping
- 5,000Hz Bandwidth

APPLICATIONS

- Harsh Environments
- Vibration & Shock Monitoring
- Impact Testing
- Safe and Arming
- Munitions Testing
- Automotive Safety Testing
- Drop Testing
- Biomechanics Testing
- Pile Driving
- Embedded Applications
- Instrumentation
- Machinery

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PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 80Hz and 5Vdc excitation unless otherwise stated.
TE reserves the right to update and change these specifications without notice.

PARAMETERS

DYNAMIC							Notes
Range (g)	±50	±100	±200	±500	±2,000	±6,000	
Sensitivity (mV/g)[1]	0.6-1.5	0.3-0.6	0.3-0.6	0.15-0.3	0.06-0.15	0.025-0.15	@5Vdc Excitation
Frequency Response (Hz)	0-1,000	0-1,200	0-1,400	0-2,000	0-4,500	0-5,000	±5%
Natural Frequency (Hz)	4,000	6,000	8,000	15,000	24,000	26,000	
Non-Linearity (%FSO)	±1	±1	±1	±1	±1	±2	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<1 Typical
Damping Ratio	0.4-0.9	0.4-0.9	0.2-0.6	0.2-0.6	0.05-0.30	0.05-0.30	
Shock Limit (g) [3]	5,000	5,000	5,000	10,000	10,000	10,000	

ELECTRICAL		
Zero Acceleration Output (mV)	±25	Differential
Excitation Voltage (Vdc)	2 to 10	
Input Resistance (Ω)	3,000-5,000	
Output Resistance (Ω)	3,000-5,000	
Insulation Resistance (MΩ)	>100	@50Vdc
Residual Noise (µV RMS)	10	Maximum
Ground Isolation	Isolated from Mounting Surface	

ENVIRONMENTAL		
Thermal Zero Shift (%FSO/°C)	-0.09	Typical
Thermal Sensitivity Shift (%/°C)	-0.15	Typical
Operating Temperature (°C)	-55 to 125	
Compensated Temperature (°C)	Uncompensated	
Storage Temperature (°C)	-55 to 125	
Humidity	Hermetically Sealed	

PHYSICAL	
Case Material	Ceramic
Weight (grams)	0.6
Mounting	Solder

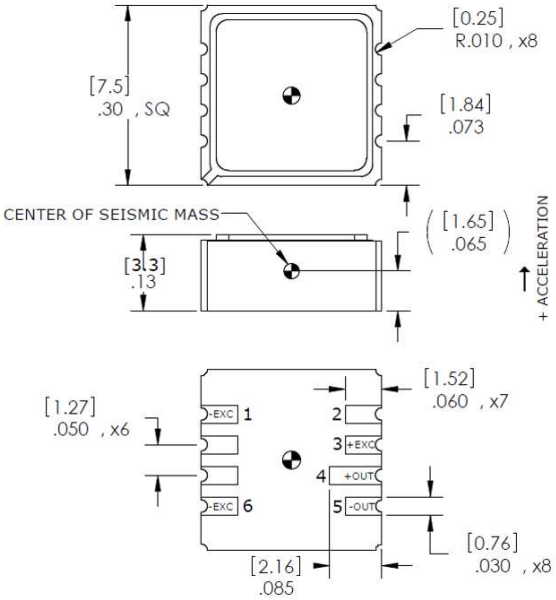
[1] Output is ratiometric to excitation voltage. 10Vdc excitation will increase output by a factor of 2x.
[2] The maximum recommended soldering temperature is +260°C
[3] 10,000g shock limit in normal axis; 5,000g in transverse axes

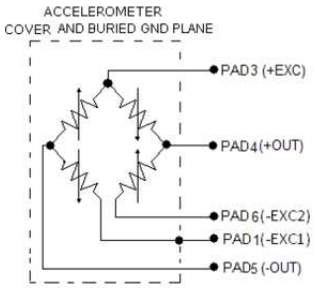
CALIBRATION SUPPLIED

CS-SENS-0100 NIST Traceable Amplitude Calibration at 100Hz and 5Vdc Excitation

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DIMENSIONS





ORDERING INFORMATION

3038-GGGG-ZZ

|_____	**Options** (No options, leave blank)
|_____	**Range** (0100 is 100g)

Options
-01 10Vdc Calibration

Part Number	Range
3038-0050	50g
3038-0100	100g
3038-0200	200g
3038-0500	500g
3038-2000	2,000g
3038-6000	6,000g

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