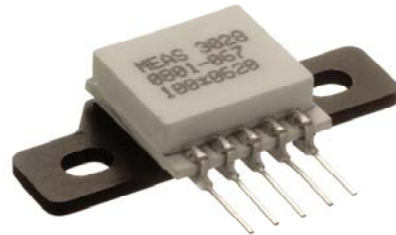


# Model 3028 Accelerometer



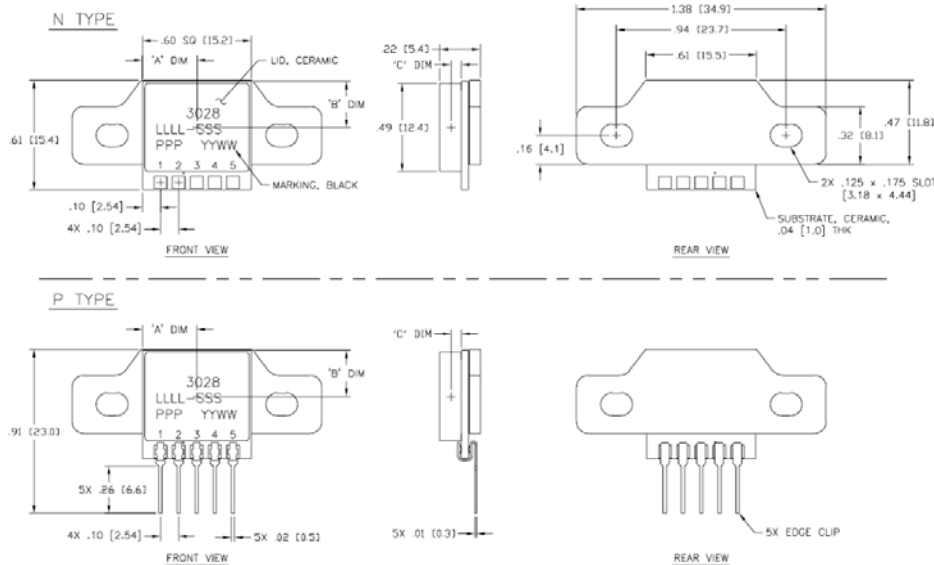
Piezoresistive MEMS  
DC Response, mV Output  
Low Cost  
Screw Mounted Flange



The **Model 3028** is a silicon MEMS accelerometer in a Wheatstone bridge configuration. It is packaged on a ceramic substrate with a metal bracket which can be used to bolt the sensor to the mounting location. The accelerometer is offered in ranges from  $\pm 2g$  to  $\pm 200g$  range and provides a flat frequency response to minimum 2000Hz. The silicon MEMS sensor is gas damped and incorporates over-range stops for high-g shock protection.

For a similar accelerometer designed for adhesive mounting, see the model 3022.

## dimensions

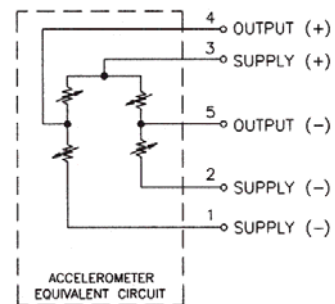


## FEATURES

- Bolt Mounted
- $\pm 0.5\%$  Non-linearity
- Open Wheatstone Bridge
- DC Response
- Gas Damping
- Built-in Overrange Stops
- Low Power Consumption

## APPLICATIONS

- Vibration & Shock Monitoring
- Motion Control
- Impact & Shock Testing
- Modal Analysis
- Embedded Applications
- Machinery



# Model 3028 Accelerometer

## performance specifications

All values are typical at +24°C, 100Hz and 5Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

### Parameters

#### DYNAMIC

	±2	±5	±10	±20	±50	±100	±200	Notes
Range (g)								
Sensitivity (mV/g) <sup>1</sup>	8.0-20.0	6.0-15.0	3.0-6.0	1.5-3.0	0.6-1.5	0.3-0.6	0.15-0.3	@5Vdc Excitation ±5%
Frequency Response (Hz)	0-150	0-250	0-400	0-600	0-1000	0-1500	0-2000	
Natural Frequency (Hz)	700	800	1000	1500	4000	6000	8000	
Non-Linearity (%FSO)	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	
Transverse Sensitivity (%)	<3	<3	<3	<3	<3	<3	<3	<1 Typical
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	0.6	
Shock Limit (g)	5000	5000	5000	5000	10000	10000	10000	

#### ELECTRICAL

Zero Acceleration Output (mV)	±25	±25	±25	±25	±25	±25	±25	Differential
Excitation Voltage (Vdc)	2 to 10	2 to 10	2 to 10	2 to 10	2 to 10	2 to 10	2 to 10	
Input Resistance (Ω)	2500- 6500	2500- 6500	2500- 6500	2500- 6500	2500- 6500	2500- 6500	2500- 6500	
Output Resistance (Ω)	2500- 6500	2500- 6500	2500- 6500	2500- 6500	2500- 6500	2500- 6500	2500- 6500	
Insulation Resistance (MΩ)	>100	>100	>100	>100	>100	>100	>100	@50Vdc Maximum
Residual Noise (µV RMS)	10	10	10	10	10	10	10	
Ground Isolation	Isolated from Mounting Surface							

#### ENVIRONMENTAL

Thermal Zero Shift (%FSO/°C)	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	Typical
Thermal Sensitivity Shift (%/°C)	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	Typical
Operating Temperature (°C)	-40 to +125							
Compensated Temperature (°C)	Uncompensated							
Storage Temperature (°C)	-40 to +125							

#### PHYSICAL

Case Material	Aluminum Flange, Ceramic Cover
Cable	Not applicable
Weight (grams)	4.5
Mounting	2x #4-40 Mounting Screws
Mounting Torque	6 lb-in (0.7 N-m)
AWG	Not applicable

<sup>1</sup> Output is ratiometric to excitation voltage

<sup>2</sup> The maximum recommended soldering temperature is +260°C

**Wiring color code:** See schematic

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## ordering info

PART NUMBERING Model Number+Range+Electrical Connection

3028-GGG-P

| |  
 | | Electrical Connection (P=pins, N=solder pads)  
 | Range (010 is 10g)

Example: 3028-010-P  
Model 3028, 10g, Pins