

Measurement Specialties brings more than twenty years experience in the design and manufacture of accelerometers and vibration sensors based on our proprietary Micro-ElectroMechanical System (MEMS), bonded gauge and piezoelectric ceramic/film technologies.

Voltage mode piezoelectric is the most popular accelerometer design due to its high level output and its wide bandwidth. We offer voltage mode accelerometers in the traditional 3-wire or 2-wire (IEPE) configurations. Charge mode piezoelectric accelerometers are designed for measuring shock and vibration in high temperature environments. In addition to its high temperature operating capability when used with a high quality charge amplifier, a charge mode accelerometer offers its users unmatched dynamic range scalability. To measure motion (velocity, displacement) accurately, an accelerometer with DC response is required. Incorporating state-of-the-art MEMS technologies and the latest analog and digital ASIC's, Measurement Specialties' DC accelerometers offer the best-in-class performance and exceptional value.



MEMS DC Accelerometers

Embedded

Uses patented piezoresistive silicon die technology with high over-range protection and broad frequency response.

						
3022	3052	3031	3038	EGHS-M	3255A	
Package	Pins or Pads	Pins or Pads	SMD	SMD	SMD	
Type	Board Level	Board Level	Board Level	Board Level	Board Level	
F.S.Range (g)	±2, 5, 10, 20, 50, 100, 200	±2, 5, 10, 20, 50, 100	±50, 100	±50, 100, 200, 500, 2000, 6000	±30K, 60K	±25, 50, 100, 250, 500
Unique Features	<ul style="list-style-type: none"> - mV output - Gas damping - Pin or pad option 	<ul style="list-style-type: none"> - Temperature compensated - Gas damping - Pin or pad option 	<ul style="list-style-type: none"> - Miniature DC response - Gas damping - Low power consumption 	<ul style="list-style-type: none"> - Hermetically sealed - High over-range protection - Gas damping 	<ul style="list-style-type: none"> - Low power - Hermetically Sealed - >200kHz resonant frequency 	<ul style="list-style-type: none"> - Self test enabled - Gas damping - Bi-directional mounting
Accuracy	±0.5% Non-linearity	±0.5% Non-linearity	±0.5% Non-linearity	±0.5% Non-linearity	±2.0% Non-linearity	±1.0% Non-linearity
Operating Temp	-40°C to 125°C	-40°C to 125°C	-40°C to 125°C	-54°C to 125°C	-55°C to 125°C	-40°C to 125°C
Dimensions (mm)	22.86 x 15.24 x 5.33	22.86 x 15.24 x 5.33	7.62 x 7.62 x 3.18	7.62 x 7.62 x 3.3	6.35 x 6.35 x 1.78	13.46 x 7.62 x 3.81
Typical Apps	Vibration/shock monitoring, tilt applications, motion control, impact testing	Vibration/shock monitoring, tilt applications, motion control, impact testing	Vibration/shock monitoring systems, motion control, impact testing	Vibration/shock monitoring, embedded systems, shock testing, safe & arm	Impact and shock testing, fuzing, safe and arming	Vibration/shock monitoring, aerospace testing, impact testing, transportation

Piezoelectric Accelerometers

Embedded Single Axis

Uses piezo-electric technology with broad frequency response for harsh applications.

Embedded Triaxial

					
805/805M1	815/815M1	LDTC Family	832/832M1	834/834M1	
Package	TO-5	TO-5	Piezo Film elements with or without mass, and pins	SMD	SMD
Type	Adhesive Mount	Adhesive Mount	Cantilever beam with vertical or horizontal pins	Board Mount	Board Mount
F.S.Range (g)	±50, ±500 / ±20, 200	±50, ±500 / ±20, 200	±10 (typical)	±25, 50, 100, 200, 500	±2000, 6000
Unique Features	<ul style="list-style-type: none"> - Hermetically Sealed - Case Grounded Design - Bandwidth to 12kHz 	<ul style="list-style-type: none"> - Hermetically Sealed - Case Grounded Design - Bandwidth to 10kHz 	<ul style="list-style-type: none"> - Very low cost - High sensitivity (1V/g) - Ultra-low power (self generating) 	<ul style="list-style-type: none"> - Low Cost - Hermetically Sealed - Piezo-Ceramic 	<ul style="list-style-type: none"> - Low Cost - Hermetically Sealed - Piezo-Ceramic
Accuracy	±1% Non-linearity	±1% Non-linearity	± 20% (typical)	±2% Non-linearity	±2% Non-linearity
Operating Temp	-50°C to 100°C	-50°C to 100°C	-40°C to 70°C	-20°C to 80°C/-40°C to 125°C	-20°C to 80°C/-40°C to 125°C
Dimensions (mm)	8.9 x 10.16	8.9 x 10.16	19.05 x 6.35 x 6.35	18.8 x 14.22 x 4.32	18.8 x 14.22 x 4.32
Typical Apps	Machine monitoring, data loggers, permanent structures	Machine monitoring data loggers, permanent structures	Wake-up switch, load imbalance, antitheft devices, impact sensing, vital signs monitoring	Data logging, asset monitoring, impact monitoring	Data logging, asset monitoring, impact monitoring