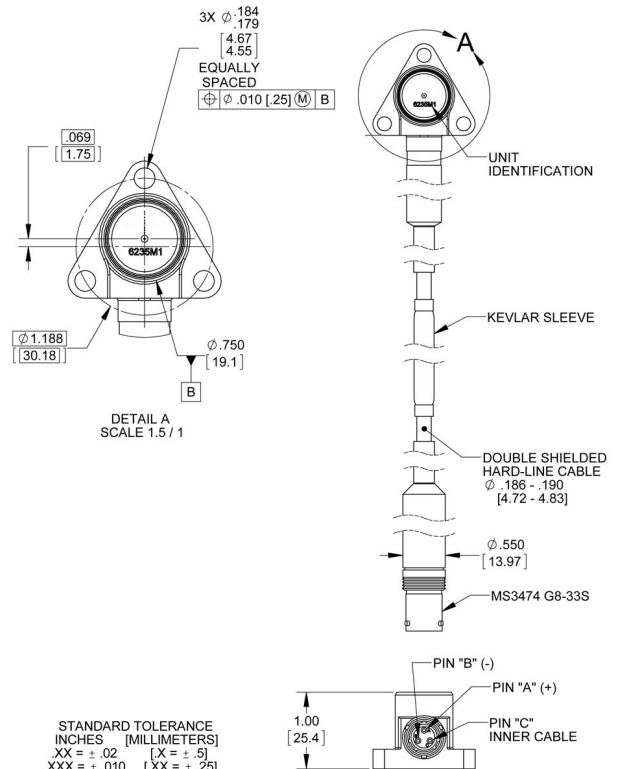
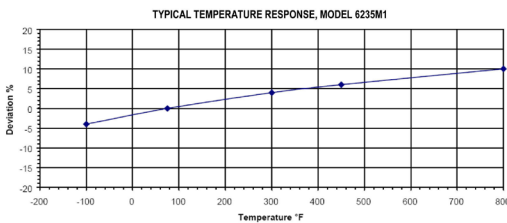
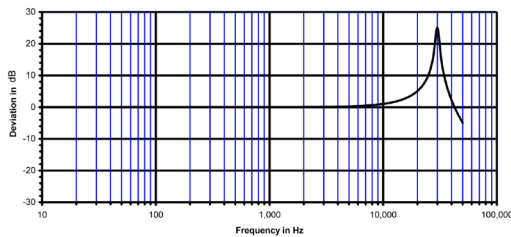
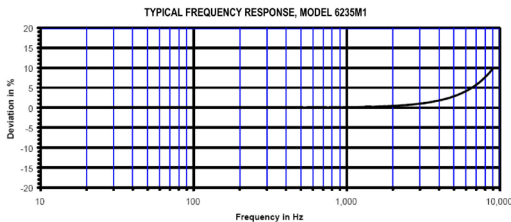
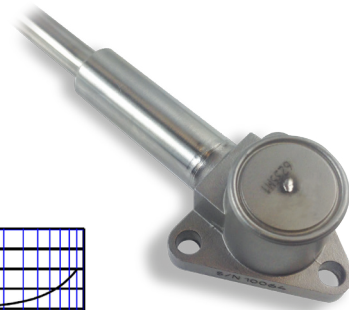


Piezoelectric accelerometer

Model 6235M1



Key features

- Requires no external power
- +900°F (+482°C) operation
- Hermetically sealed
- Ground isolated
- Balanced differential output

Description

The Meggitt model 6235M1 piezoelectric accelerometer is designed for high temperature vibration monitoring and use in high temperatures, wet and dusty environments, and where high radiation is encountered. Accumulated radiation of 10^{10} rad and up to 10^{18} thermal neutrons/cm² can be tolerated. This accelerometer is designed for continuous operation to 482°C.

The Model 6235M1 has a Kevlar covered, double shielded hard-line cable with a three socket MS3474G8-33S receptacle.

The Model 6235M1 is designed and manufactured by Meggitt and incorporates Meggitt's compression element to provide a balanced output, excellent temperature stability and wide operational bandwidth. Model 6235M1 provides an electrically balanced differential output isolated from case ground for use with differential charge amplifiers.

Signal conditioner models 2777A, 6634C or equivalent are recommended for use with this high impedance accelerometer.

Piezoelectric accelerometer

Model 6235M1

Specifications

The following performance specifications conform to ISA-RP-37.2 and are referenced at +75°F (+24°C), and 159.2 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Dynamic characteristics	Units	Value
Charge sensitivity (±5%)	pC/g	10 ±5%
Frequency response		See typical amplitude response
Resonance frequency	kHz	30(typ),26(min)
Amplitude response ±1dB	Hz	1 to 9000
Temperature response		See typical curve
Transverse sensitivity	%	≤ 3 maximum
Amplitude linearity (up to vibration limit)	%	1%/500 g
Electrical characteristics		
Output polarity		Receptacle: Polarity is positive on the pin A (external view) for an acceleration directed from the mounting surface into the body of accelerometer
Resistance		
Between signal pins	MΩ	>100 at room temp.
Each signal pin to case	KΩ	100 minimum at 900°F (482°C)
Capacitance		
between signal pins	MΩ	>100 at room temp.
Grounding	pF	725(typ) sensor element only, (1250 including hard-line cable) Signal return isolated from case
Environmental characteristics		
Temperature range [1] (accelerometer only)		-325°F to +900°F (-196°C to +482°C)
Humidity		Hermetically sealed
Sinusoidal vibration limit	g pk	1000
Shock limit	g pk	2000
Base strain sensitivity	equiv. g pk /μ strain	0.002
Thermal transient sensitivity	equiv. g pk /°F	0.1
Radiation		
Integrated gamma flux	rad	up to 6.2x10 ¹⁰
Integrated neutron flux	N/cm ²	up to 3.7x10 ¹⁸
Electromagnetic Sensitivity 50Hz, 38mT typ	m/s ² /T	20
Physical characteristics		
Dimensions		See outline drawing
Weight, without cable	gm (oz)	75 (2.6)
Case material		Inconel
Connector		Mating connector of MS3474G8-33S
Mounting torque	lbf-in (Nm)	14 (1.6)
Supplied calibration		
Charge frequency response	%	50 to 9000 Hz
Phase response	deg	50 to 9000 Hz
Charge sensitivity at 100 Hz	pC/g	
Resistance	MΩ	Pin to pin
Isolation resistance	MΩ	Each pin to case

Piezoelectric accelerometer

Model 6235M1

Accessories

Product	Description	6235M1
Meggitt EH700	Non-isolated mounting screw, metric 4mm, qty 3	Included
Meggitt EHW199	Lockwasher, No 8, qty 3	Included
Meggitt EHM1641	Wrench hex key, metric, qty 1	Included

Notes

- Spurious High Frequency discharge may be exhibited by this device for several minutes after exposure to temperature transients of greater than -100° F (38° C) per minute.
- Model number definition: 6235M1 - XXX

