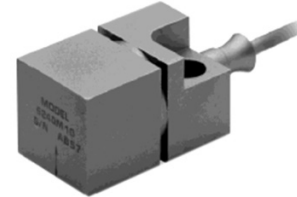


EXTREME+HIGH TEMPERATURE PIEZOELECTRIC ACCELEROMETER (E+HTPE)

Model 6240M10/6240M11



Product description

The Parker Meggitt models 6240M10 /6240M11 piezoelectric accelerometers are uniquely designed for continuous operation at +1200°F (+650°C) and intermittent operation up to +1400°F (+760°C). The 6240M10/6240M11's small size allows for installation in cramped quarters. These accelerometers are self-generating devices that requires no external power source for operation. The 6240M11 has its sensitive axis perpendicular to the mounting surface and the 6240M10 has its sensitive axis in line with the mounting hole.

Electrical connection is made through an integral hardline triaxial cable terminated with a 10-32 receptacle. Cable assemblies 3075M6 and 1001-ZZZ or equivalent are designed to mate with this receptacle. The sensing elements and integral shield are isolated from the case. The standard cable length is 120 inches, however, other cable lengths are also available on special order.

Model number definition:

6240M10 = sensitive axis in line with mounting hole

6240M11 = sensitive axis perpendicular to mounting hole

6240MXX -ZZZ

ZZZ = cable length in inches

Key features and benefits

- +1200°F (+650°C) operation, +1400°F (+760°C) intermittent
- Hermetically sealed
- No pyroelectric or thermal velocity spiking
- Single bolt mount
- Ground isolated
- RoHS compliant

Applications

- Aircraft and gas turbine engine monitoring
- Test cell vibration measurements
- Nuclear applications



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Specifications

The following performance specifications are typical values, referenced at +75°F (+24°C) unless otherwise noted.

Dynamic characteristics	Units	6240M10/6240M11
Charge sensitivity, ±10%	pC/g	5.0
Resonance frequency	kHz	10
Amplitude response [1][2]		
±5%	Hz	30 to 2000
±1 dB	Hz	1 to 3000
Charge temperature response		±10% to 1200°F (+650°C)
Transverse sensitivity	%	≤ 5
Amplitude linearity per 200 g, 0 to 1000 g	%	1
Electrical characteristics		
Output polarity		Acceleration directed into base of unit produces positive output
Resistance (between pins) at +1200°F (+650°C) [3]	MΩ kΩ	≥ 100 ≥ 10
Isolation (between pins) at +1200°F (+650°C)	MΩ kΩ	≥ 100 ≥ 100
Capacitance accelerometer without hardline cable	pF	180
Hardline cable capacitance (conductor to inner shield)	pF/ft (pF/m)	110 (361)
Grounding		Signal return isolated from case
Environmental characteristics		
Temperature [4]		
Continuous		-65°F to +1200°F (-54°C to +650°C)
Intermittent [5]		-65°F to +1400°F (-54°C to +760°C)
Connector		-65°F to +500°F (-54°C to +260°C)
Humidity		
Transducer/cable		Hermetically sealed
Sinusoidal vibration limit	g pk	250
Shock limit	g pk	1000
Physical characteristics		
Dimensions		See outline detail Weight
Sensor without integral cable	oz (gm)	3.3 (95)
Integral cable	oz/in (gm/in)	0.04 (1.16)
Case material		Inconel
Hardline cable		Triaxial, 0.125 inch-diameter
Connector		Coaxial receptacle with 10-32 UNF threads
Mounting		Single recessed hole for 1/4 inch screw.
Mounting torque	lbf-in (Nm)	24 (2.7)



**Defense
Systems**

EXTREME+HIGH TEMPERATURE PIEZOELECTRIC ACCELEROMETER (E+HTPE)

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Calibrations supplied

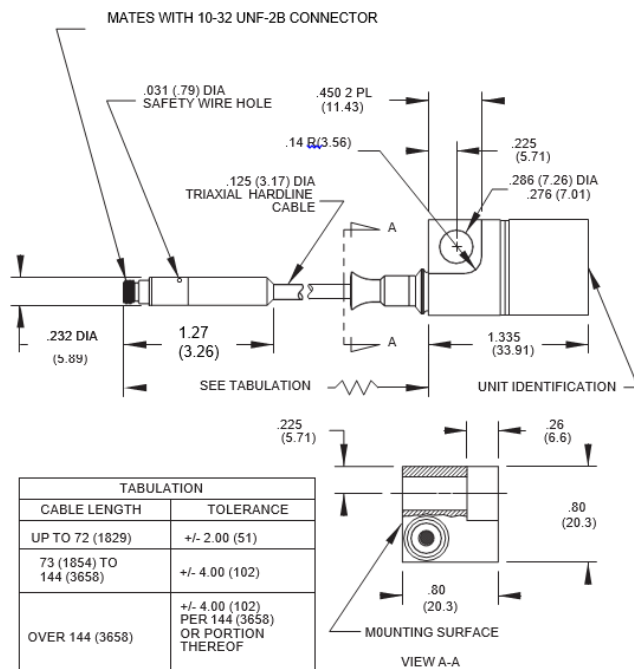
Charge sensitivity (100 Hz)	pC/g
Transverse sensitivity	%
Capacitance	pF

Accessories

SUPPLIED: EH802 MOUNTING SCREW, ¼-28 UNF X 1 inch hex cap screw
 OPTIONAL: Model 1001-ZZZ Cable assembly, +550°F (288°C)
 OPTIONAL: Model 3075M6-ZZZ Cable assembly +900°F (482°C)

Notes

1. Frequency response is controlled by the resonance characteristics of the transducer. Estimated calibration errors are ±1.5% to 900 Hz & 2.5% from 900 Hz to 5 KHz.
2. Low-end response of the transducer is a function of its associated electronics.
3. The electrical resistance of piezoelectric materials decreases with an increase in temperature but remains above 10 000 Ω at +1200°F (+650°C).
4. For cable lengths of less than 12 inches (0.30 m), the maximum operating temperature is +500°F (+260°C).
5. Intermittent exposure is defined as 5 minutes over a 30 minute period.



Continued product improvement necessitates that MEGGITT reserve the right to modify these specifications without notice. MEGGITT maintains a program of constant surveillance over all products to ensure a high level of reliability. This program includes attention to reliability factors during product design, the support of stringent Quality Control requirements, and compulsory corrective action procedures. 010121

