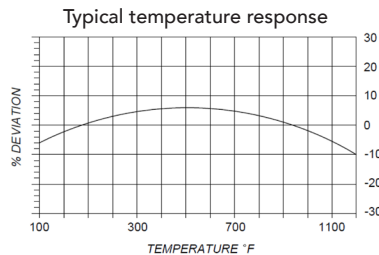
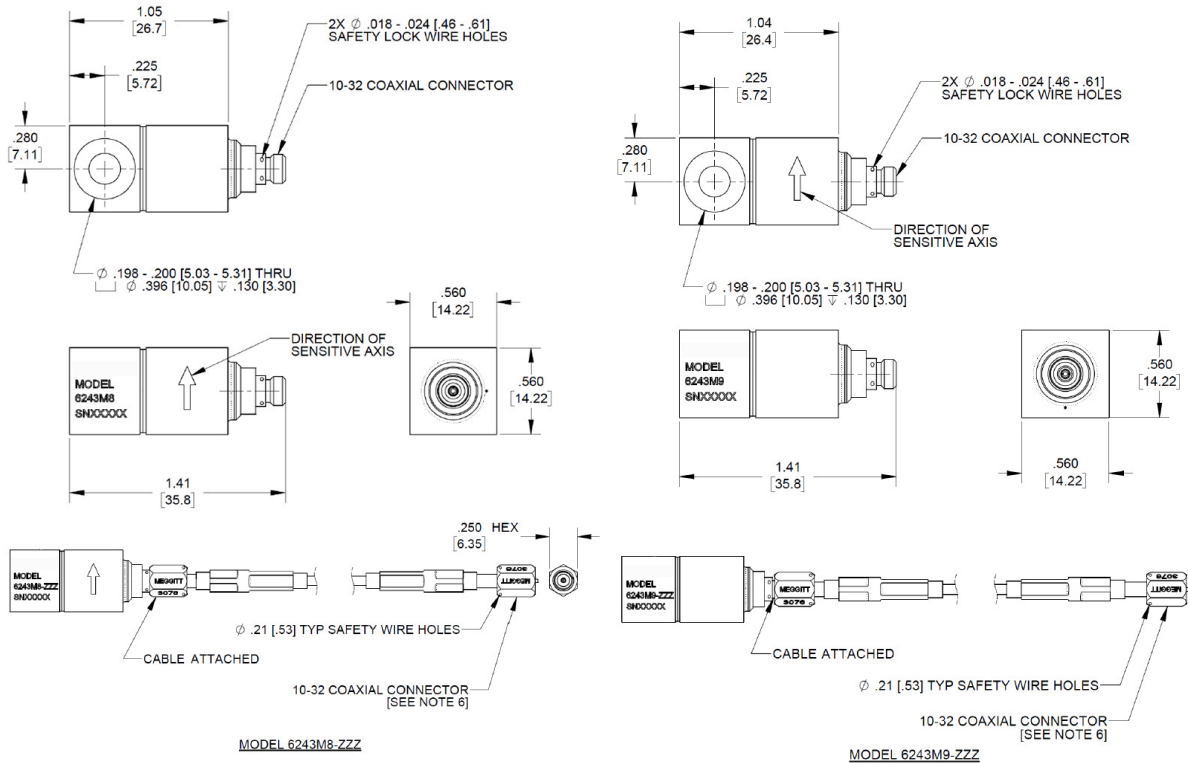


# Piezoelectric accelerometer

## Model 6243M8/M9



### Key features

- +1000°F (+538°C)
- High temperature softline cable attached
- Hermetically sealed
- No pyroelectric or thermal velocity spiking
- Single bolt mount
- Ground isolated

### Description

Meggitt model 6243M8 and 6243M9 piezoelectric accelerometers are designed specifically for use in extremely high temperature environments such as aircraft and ground-based gas turbines. These accelerometers are designed for continuous operation at +1000°F (+538°C). The small size and light weight of these accelerometers facilitate installation in cramped locations with minimal structural support.

6243M8 and 6243M9 incorporate Meggitt's MC2 shear mode crystal. The 6243M8 has its sensitive axis located in line with the mounting screw. The 6243M9 has its sensitive axis located perpendicular to the mounting screw. The sensing elements and integral shield are isolated from the case. The accelerometer output is terminated through a 10-32 coaxial receptacle. The dash numbers at the end of the model number define an integral coaxial high temperature softline cable that is permanently installed on the 10-32 connector.

# Piezoelectric accelerometer

## Model 6243M8/M9

### Specifications

The following performance specifications conform to ISA-RP-37.2 and are typical values, referenced at +75°F (+24°C) and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Dynamic characteristics	Units	6243M8/M9
Charge sensitivity		
Typical	pC/g	5.5
Tolerance	pC/g	±0.5
Frequency response		
Resonance frequency		
Typical	kHz	11
Minimum	kHz	9
Typical amplitude response [1][2]		
±5%	Hz	1 to 2000
±10%	Hz	1 to 3000
±3dB	Hz	1 to 6000
Temperature response		See typical curve
+1000°F (+538°C) max/min	%	±15
Transverse sensitivity	%	≤5
Amplitude linearity per 500g, 0 to 2000 g	%	1
<b>Electrical characteristics</b>		
Output polarity		Acceleration in direction of arrow marked on unit produces positive output
Resistance		
Over temperature range [3]	kΩ	>200
Capacitance		
Transducer, excluding cable	pF	50
Dielectric strength	V	500
Grounding		Signal return isolated from case
<b>Environmental characteristics</b>		
Temperature range		
Transducer and cable, continuous	°F (°C)	-65 to +1000 (-55 to +538)
Humidity (transducer)		Hermetically sealed
Sinusoidal vibration limit	g	500
Shock limit	g	2000
Cable bend repeatability		200 bends, minimum
<b>Physical characteristics</b>		
Dimensions		See outline drawing
Weight excluding cable	grams (oz)	30 (1.1)
Case material		Inconel
Connector (End of attached cable)		Male 10-32 coaxial
Mounting torque	lbf-in (Nm)	18 (2)
<b>Calibration data supplied</b>		
Charge sensitivity	pC/g	
Frequency response	%	50 Hz to 3000 Hz
Transverse sensitivity	%	
Capacitance	pF	

# Piezoelectric accelerometer

## Model 6243M8/M9

### Accessories

Product	Description	6243M8/M9
Meggitt EH471	Mounting screw (10-32 x 0.75 in, 12 pt)	Included
Meggitt 3076-ZZZ	Cable assembly, +1000°F (+538°C)	Included (attached)
133	Signal conditioner	Optional
2771CM2-1	Remote charge converter	Optional

### Notes

1. Frequency response is controlled by the resonance characteristics of the transducer. Estimated calibration errors are ±1.5% to 900 Hz and ±2.5% from 900 Hz to 5000 Hz.
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 200kΩ.
4. Dash number "ZZZ" indicates the cable length in inches. See table below for tolerance on the cable lengths for the 6243M8 and 6243M9.

Length "ZZZ"	Tolerance
Up to 72.00 inches (1.83 m)	±2.00 inches (50.8 mm)
Over 72.00 inches (1.83 m) to 144.00 in (3.66m)	±4.00 inches (101.6 mm)
Over 144.00 inches (3.66 m)	±4.00 inches (101.6 mm) per 144.00 inches (3.66 m) or part thereof

