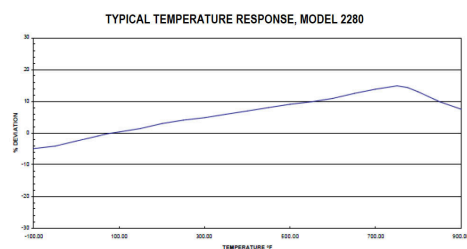
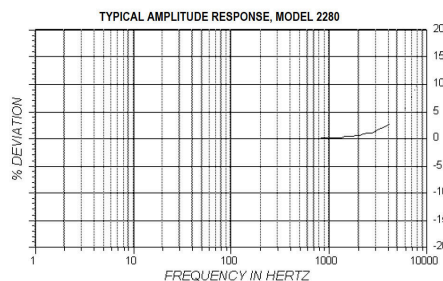
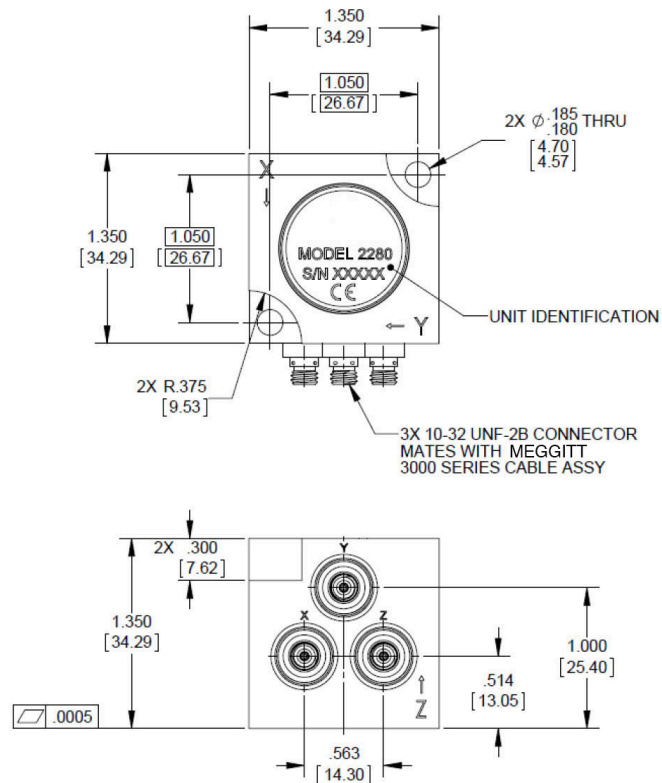


Piezoelectric accelerometer

Model 2280



Key features

- New! 2280-R available as replacement sensor
- High temperature operation (+482°C)
- Triaxial
- Ground isolated
- Gas turbine testing

Description

The Meggitt model 2280 is a high temperature triaxial piezoelectric accelerometer for shock and vibration measurements at temperatures up to +900°F (+482°C). This accelerometer is 1.35 inch (35 mm) square and weighs less than 0.6 pounds (270 grams). It features three 10-32 side connectors and is mounted with two 8-32 bolts.

The model 2280 features Meggitt's crystal in the compression mode. The design provides mechanical isolation of the sensing assembly from the mounting surface, minimizing base strain sensitivity. The unit is hermetically sealed and signal ground is isolated from the outer case of the unit. The unit is fully compliant to European Union's Low Voltage directive, 2006/95 EC, EMC directive 2004/108/EC, and bears the CE mark.

Signal conditioner models 2721B, 2771C or equivalent are recommended for use with this accelerometer.

Piezoelectric accelerometer

Model 2280

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
Charge sensitivity		
Typical values	pC/g	3.0
Minimum	pC/g	2.4
Frequency response		See typical amplitude response
±5%	Hz	10 to 4000
Mounted resonance frequency (typical)	kHz	25
Minimum	kHz	20
Transverse sensitivity	%	≤ 5
Amplitude linearity	%	1
Per 1000g, 0 to 3000 g		
Temperature response	%	±18 over temperature range (See typical temperature response curve)
Electrical characteristics		
Resistance between pins		
Room temperature (typical)	GΩ	1
At +900°F (+482°C) [1]	KΩ	≥ 100
Resistance pins to case		
Room temperature	MΩ	≥ 100
At +900°F (+482°C)	MΩ	≥ 10
Capacitance	pF	250
Grounding		Signal return isolated from case
Environmental characteristics		
Temperature range		-65°F to +900°F [-54°C to +482°C]
Humidity		Hermetically sealed
Sinusoidal vibration limit	g pk	500
Shock limit	g pk	3000
Base strain sensitivity	equiv. g pk/μstrain	0.005
Transient temperature [2]	g pk/°F	0.10 equiv
Physical characteristics		
Dimensions		See outline drawing
Weight	lb (gm)	0.55 (250)
Case material		Inconel
Connector		10-32 coaxial connector (3x)
Mounting torque	lbf-in (Nm)	18 to 20 (2 to 2.3)
Calibration		
Supplied:		
Frequency response each axis	%	30 Hz to 4000 Hz
Sensitivity	pC/g	
Maximum transverse sensitivity	%	
Capacitance	pF	

Piezoelectric accelerometer

Model 2280

Accessories

Product	Description	2280	2280-R
Meggitt EH428	Mounting screws, 8-32 (2x)	Included	Included
Meggitt 3075M6-120	Cable assembly, for > +482°C, 10 ft (3x)	Included	Optional
3090C-120	Cable assembly, for > +260°C, 10 ft	Optional	Optional
2721B	Signal conditioner	Optional	Optional
2771C	In-line charge convertor	Optional	Optional
Meggitt EH867	Metric head cap screw, M4X.7mm X 40mm	Optional	Optional

Notes

1. Because of low resistance at high temperatures, the signal conditioner must be capable of operating with the specified source resistance. Contact factory if you have any questions.
2. With 1 Hz high pass filter.