

HIGH TEMPERATURE PIEZOELECTRIC TRIAXIAL ACCELEROMETER (HTPE) Model 2280



Product description

The Parker 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 Parker 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.

Model number definition:

2280 = basic model number

2280-R = replacement sensor, no accessories

2280-US = Made in the USA

Key features and benefits

- Triaxial
- High temperature operation 900°F (+482°C)
- Ground Isolated
- Rugged design
- RoHS compliant

Applications

- Gas Turbine testing
- 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

Charge Sensitivity (typical)	pC/g	3.0
Minimum	pC/g	2.4
Frequency response		
See typical amplitude		
±5%	Hz	response 10 to 4000
Resonance (typical)	kHz	25
Minimum	kHz	20
Temperature response	%	±18 max over temperature range
Transverse sensitivity	%	≤ 5
Amplitude linearity	%	1

Electrical characteristics

Resistance at room temperature (typical)	>1GΩ
At +900°F (+482°C) [1]	>100KΩ
Capacitance	250 pF
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	500 g pk
Shock limit	3000 g pk
Base strain sensitivity	0.005 pk/μstrain
Transient temperature [2]	0.10 equiv g pk/°F

Physical characteristics

Dimensions	See Outline details
Weight	0.55 lb. (250 gm)
Case Material	Inconel
Connector	10-32 coaxial (3X)
Mounting torque	18 to 20 lbf-in (2 to 2.3 Nm)
Mounting	8-32 bolts (qty 2)

Calibration Supplied

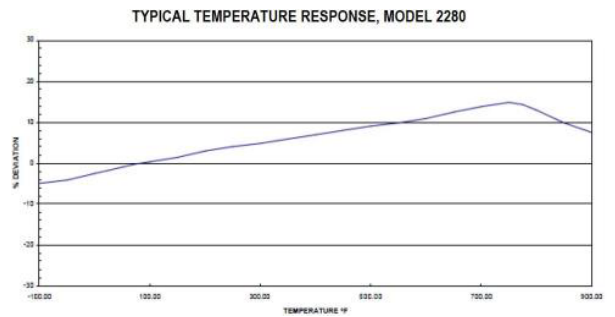
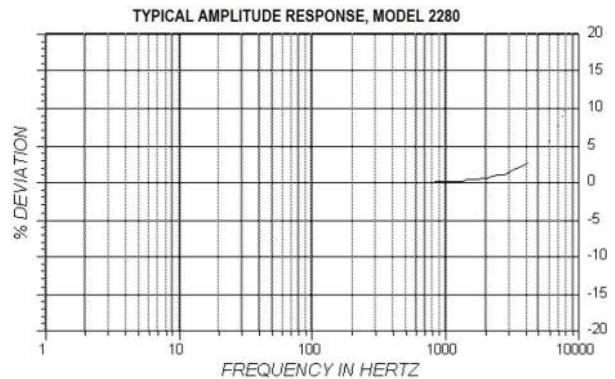
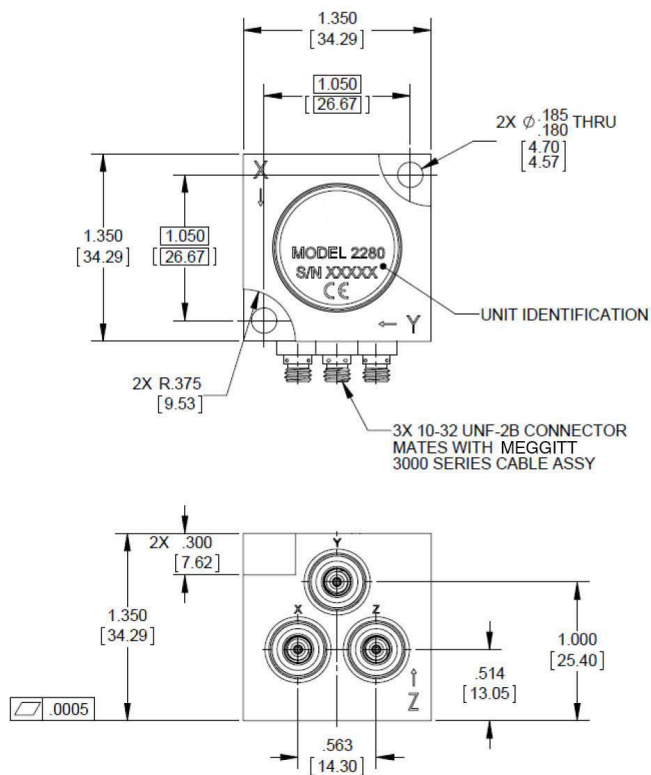
Charge Sensitivity	pC/g
Frequency response through resonance	30 Hz to 4000 Hz, each axis
Maximum transverse sensitivity	%
Capacitance	pF

Accessories

SUPPLIED: EH428 Mounting screws 8-32 (QTY 2)/ 3075M6-120/3075M6-120-US Cable assembly, 900°F (+482°C) (QTY 3)
 OPTIONAL: Model 1001-120 Cable assembly, 550°F (+288°C)/EH867 Metric head cap screw, M4 x 7mm X40mm

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Notes:

- [1] Signal conditioner must be able to accept 100 k ohm source resistance
- [2] Measured with a 1 Hz high pass filter.

Parts made in the USA are marked with 2280-US



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



Note: Due to continuous process improvement, specifications are subject to change without notice. TCO Review # 337