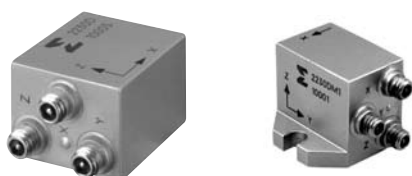


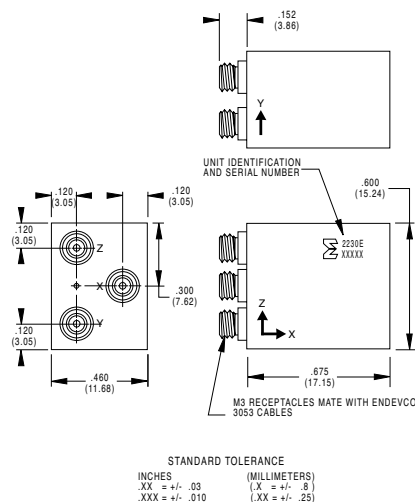
Model 2230E / EM1 Piezoelectric accelerometer

Features

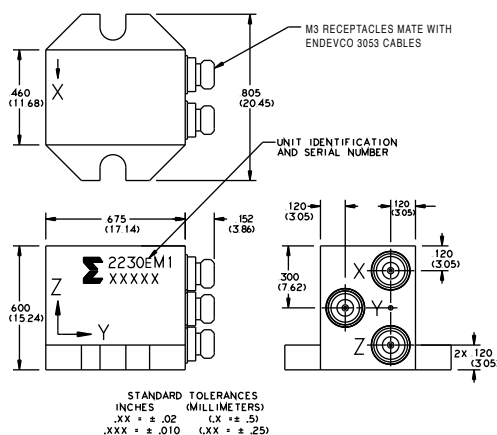
- **NEW!** 2230E-R available as replacement sensor
- Miniature high temperature triaxial (+260°C)
- Light weight (17 gm / 22.5 gm)
- Case grounded
- High temperature, aerospace/industrial/automotive



2230E



2230EM1



北京汇润科贸有限公司

电话：+ 86 010 5601 8989

+ 86 010 5601 7979

传真：+ 86 010 5885 7266

邮箱：sales@aq315.com

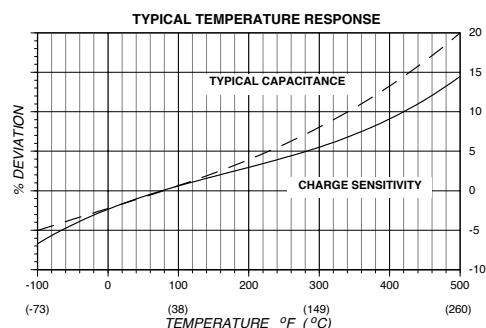
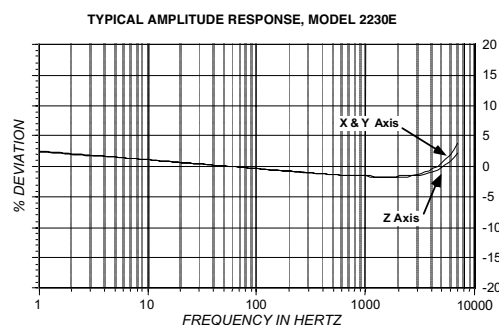
<http://www.aq315.com>

Description

The Endevco® model 2230E/2230EM1 is a miniature triaxial piezoelectric accelerometer designed specifically for vibration measurement in three orthogonal axes on small structures and objects. The transducer features three M3 receptacles for output connection. The 2230E is designed to be mounted with adhesive. The 2230EM1 is mounted with two supplied cap screws. Its light weight effectively minimizes mass-loading effects. The accelerometer is a self-generating device that requires no external power source for operation.

The model 2230E/2230EM1 features Endevco's Piezite® Type P-8 crystal elements, operating in annular shear mode, which exhibit excellent output sensitivity stability over time. Signal ground is connected to case and mounting surface of the unit. Low-noise, flexible coaxial cables are supplied for error-free operation.

Endevco signal conditioner models 133, 2771C, 2775B or OASIS 2000 computer-controlled system are recommended for use with this high impedance accelerometer.



Model 2230E / EM1 Piezoelectric accelerometer

Endevco

Specifications

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C), 4 mA and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied

Dynamic characteristics	Units	2230E	2230EM1
Charge sensitivity			
Typical	pC/g	3.0	3.0
Minimum	pC/g	2.0	2.0
Frequency response			See typical amplitude response
Resonance frequency	kHz	21	21
Amplitude response [1]			
±5%	Hz	1 to 7000	1 to 5000
±1 dB	Hz	1 to 10 000	1 to 10 000
Temperature response			See typical curve
Transverse sensitivity	%	≤5	≤5
Amplitude linearity	%		1 per 500 g, 0 to 2000g
Electrical characteristics			
Output polarity			Acceleration in the direction of axis arrow produces positive output.
Resistance	GΩ	≥10	≥10
Resistance at +500°F (+260°C)	MΩ	≥25	≥25
Capacitance	pF	770	770
Grounding			Signal return is connected to case.
Environmental characteristics			
Temperature range			-67°F to +500°F [-55°C to +260°C]
Humidity			Hermetically sealed
Sinusoidal vibration limit	g pk	1000	1000
Shock limit [2]	g pk	2000	2000
Electromagnetic sensitivity	equiv. g rms/gauss	0.01	0.01
Physical characteristics			
Dimensions			See outline drawing
Weight	gm (oz)	17 (0.6)	22.5 (0.79)
Case material			304L stainless steel
Connector			M3 x 0.5 6H thread, mates with Endevco 3053 cables
Mounting torque	lbf-in (Nm)	NA	13.5 (1.25)
Calibration			
Supplied:			
Charge sensitivity	pC/g		
Capacitance	pF		
Maximum transverse sensitivity	%		
Charge frequency response	%		20 Hz to 10 000 Hz

Accessories

Product	Description	2230E	2230E-R	2230EM1
3053V-120	Versaflex cable assembly, 10 ft (3x)	Included	Optional	Included
EH409	4-40 x .375 screws (2x)	N/A	N/A	Included
2771C	In-line charge convertor	Optional	Optional	Optional
133	Signal conditioner	Optional	Optional	Optional
2775B	Signal conditioner	Optional	Optional	Optional
4990A-1	OASIS 2000 computer-controlled system	Optional	Optional	Optional

Notes:

- Low-end response of the transducer is a function of its associated electronics.
- Short duration shock pulses, such as those generated by metal-to-metal impacts, may excite transducer resonance and cause linearity errors. Send for TP290 for more details.
- Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 800-982-6732 for recommended intervals, pricing and turn-around time for these services -as well as for quotations on our standard products.



Continued product improvement necessitates that Endevco reserve the right to modify these specifications without notice. Endevco 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. These measures, together with conservative specifications have made the name Endevco synonymous with reliability.

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