ENDEVCO
AN AMPHENOL COMPANY

PERFORMANCE SPECIFICATION
ACCELEROMETER
7240C

Document Number	Rev	Date	Entered by	Description of Change	Change Accountable Engineer	ECO
77723	NR	4/25/23	NAD	Initial Release Performance Specification Accelerometer for 7240C	DAM	53750

1.0 DESCRIPTION

The ENDEVCO® Model 7240C is a miniature, light weight piezoelectric accelerometer designed specifically for high frequency vibration measurement in structures and objects. Its unique sensor design allows high seismic resonance and ruggedness in the same package. The unit is hermetically sealed against environmental contamination, and its light weight (4.8 gm) effectively minimizes mass loading effects.

The Model 7240C features ENDEVCO's PIEZITE® Type P-8 crystal element, operating in annular shear mode, which exhibits low base strain sensitivity, wide bandwidth, and excellent output stability over time. This piezoelectric accelerometer self-generates its high impedance output and requires no external power for operation. Signal ground is connected to the outer case of the unit. When used with one of the supplied isolated mounting studs, the accelerometer is electrically isolated from ground. A specifically designed low-noise coaxial cable is required for error-free operation.

The following performance specifications conform to ISA-RP-37.2 (1964) 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.

		Units	
2.0	**DYNAMIC CHARACTERISTICS**		
2.1	CHARGE SENSITIVITY		
	Typical	pC/g	3.0
	Minimum	pC/g	2.3
2.2	FREQUENCY RESPONSE		See Typical Curve
2.2.1	Resonance Frequency		
	Typical	kHz	90
	Minimum	kHz	80
2.2.2	Amplitude Response [1]		
	± 1 dB	Hz	1 to 20 000
	±5%	Hz	1 to 10 000
2.3	TEMPERATURE RESPONSE		See Typical Curve From -67°F (-55°C) to +500°F (+260°C)
2.4	TRANSVERSE SENSITIVITY	%	≤ 5
2.5	AMPLITUDE LINEARITY Per 500 g, 0 to 5000 g	%	1

		Units	
3.0	**ELECTRICAL CHARACTERISTICS**		
3.1	OUTPUT POLARITY		Acceleration directed into base of accelerometer produces positive output.
3.2	RESISTANCE	GΩ	≥ 10
3.3	CAPACITANCE	pF	615 - 925
3.4	GROUNDING		Signal ground connected to case
4.0	**ENVIRONMENTAL CHARACTERISTICS**		
4.1	TEMPERATURE RANGE		-67°F to +500°F (-55°C to +260°C)
4.2	HUMIDITY		Hermetically sealed
4.3	SINUSOIDAL VIBRATION LIMIT	g pk	1000
4.4	SHOCK LIMIT [2]	g pk	5000
4.5	BASE STRAIN SENSITIVITY With 2980M12 & 2980M13 With 2981-11	 equiv. g pk/µ strain equiv. g pk/µ strain	 0.0005 0.005
5.0	**PHYSICAL CHARACTERISTICS**		
5.1	DIMENSIONS		See Outline Drawing
5.2	WEIGHT	gm (oz)	4.8 (0.17)
5.3	CASE MATERIAL		Stainless Steel
5.4	CONNECTOR		Coaxial, M3 X 0.5 6H thread
5.5	MOUNTING TORQUE With 2981-11	lbf-in (Nm)	18 (2)
6.0	**ACCESSORIES**		
6.1	SUPPLIED 2980M12 2981-11 3053V-120 2980M13 1X		 Mounting Stud, 1X Mounting Stud, 1X Cable Assembly, 1X [3] Mounting Stud, Adhesive Type,

		Units	
6.2	OPTIONAL ACCESSORIES		
	3053VM1-120		Cable Assembly, 1X
	3901-118		Cable Assembly, 1X

7.0 CALIBRATION

7.1	SUPPLIED		
	Charge Sensitivity	pC/g	
	Capacitance	pF	
	Transverse Sensitivity	%	
	Frequency Response	dB	50 Hz to 50 kHz

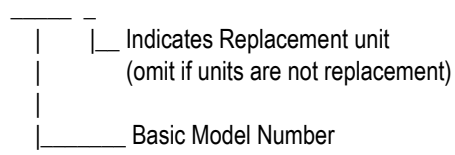
8.0 NOTES

[1] Low-end response of the transducer is a function of its associated electronics.

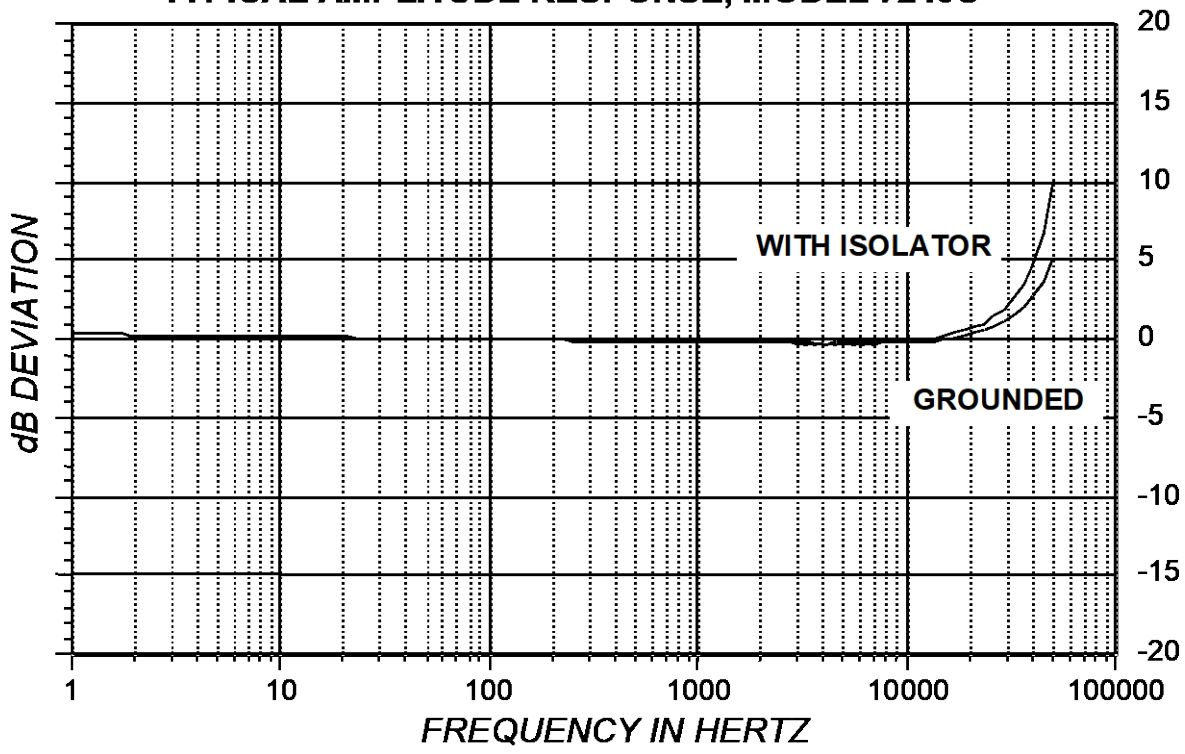
[2] Shock pulses of short duration may excite transducer resonance. Shock level above the sinusoidal vibration limit may produce temporary zero shift, which will result in erroneous velocity or displacement data after integration.

[3] For "-R" units, the accessories noted are optional.

4 7240C-R (Model Number Definition)



TYPICAL AMPLITUDE RESPONSE, MODEL 7240C



TYPICAL TEMPERATURE RESPONSE, MODEL 7240C