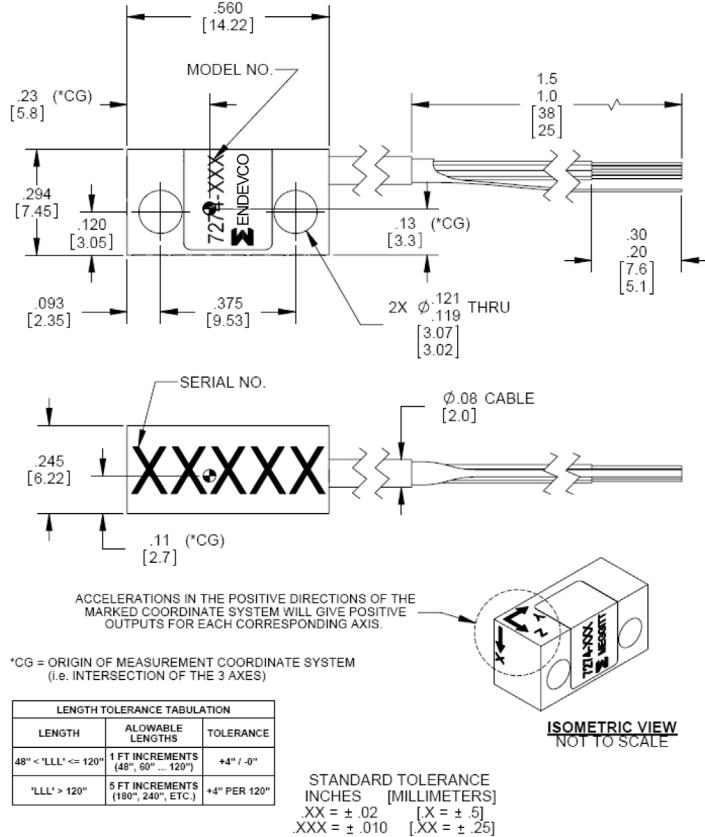


Triaxial piezoresistive accelerometer

Model 7274



The ENDEVCO® Model 7274 series is a family of rugged, undamped, piezoresistive triaxial accelerometers designed for high-acceleration shock measurements in three mutually perpendicular axes. This family uses three sensors that are packaged in a mutually orthogonal arrangement in a two bolt-mount housing which shares the same footprint and bolt pattern as ENDEVCO® Model 7270A. The housing boasts a robust eight conductor cable that can repeatedly withstand the high-acceleration shock environment.

The Model 7274 utilizes the same highly efficient sensing system as the Model 7270A. For each axis, the sensor is sculptured from a single chip of silicon, which includes the inertial mass and strain gages arranged in a four-active-arm Wheatstone bridge circuit. The Model 7274 is available in ranges from 2,000 g to 60,000 g, with all three axes having the same range. Selectable ranges per axis are available by special request.

60,000 g ranges are subject to International Traffic in Arms Regulations (ITAR), and as such a license is required for shipments outside the U.S. and other restrictions may apply.

Key features

- > 2000, 6000, 20 000 and 60 000 g ranges
- > High resonance frequency
- > Rugged to 3X full scale range
- > No damping for fast response time
- > Minimal zero shift after shock

Triaxial piezoresistive accelerometer

Model 7274

Specifications

All specifications are referenced at +75°F (+24°C) and 5 Vdc, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Dynamic characteristics	Units	2K	6K	20K	60K
Linear range	g	2,000	6,000	20,000	60,000
Sensitivity min/typ [1]	µV/g	25/50	7.5/15	2.5/5	.75/1.5
Natural frequency (typ)	kHz	90	180	350	700
Shock limit [max]	g	6,000	18,000	60,000	180,000
Zero measureand output [max]	mV	±50	±50	±50	±50
Transverse sensitivity (typ)	%	3	3	3	3
Thermal zero shift (typ) [2]	mV	5	5	5	5
0°F to +150°F (-18°C to +66°C)	%/C	-0.12	-0.12	-0.12	-0.12
Thermal sensitivity shift (typ)	%/C				
Electrical characteristics					
Excitation	Vdc	5 to 12 (5 standard)			
Resistance					
input	Ω	217 ± 100			
output	Ω	650 ± 300			
Isolation resistance		100 MΩ min at 50 VDC between cable leads and cable shield or case			
Physical characteristics					
Case material		17-4 PH CRES			
Weight (excluding cable)		2.9 grams			
Cable weight		10.2 grams/meter [0.11 ounces/foot]			
Cable		(8) 34 AWG SPC alloy conductors, with SPC braided shield and FEP jacket			
Mounting		4-40 high strength screws (x2)			
Recommended mounting torque		8 ± 2 lbf-in (0.9 N-m)			
Environmental					
Temperature					
Operating [3] [4]	°C (F°)	- 55 to + 121 (- 67 to + 250)			
Storage	°C (F°)	- 55 to + 121 (- 67 to + 250)			
Calibration data		Data for sensitivity, ZMO, input and output resistance are supplied on the calibration certificate. Unless specified by the customer at time of order, the default calibration will be performed at 5 Vdc excitation.			

Triaxial piezoresistive accelerometer

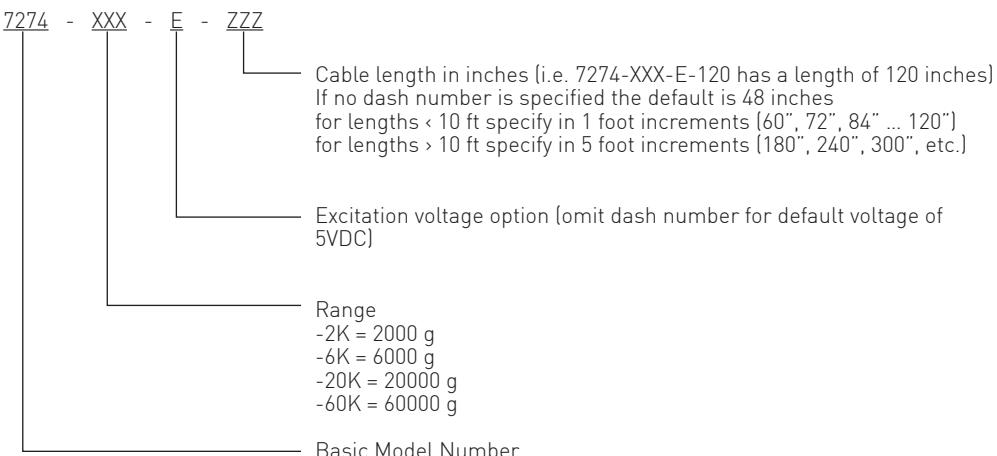
Model 7274

Accessories

Product	Description	7274
EH815	[2] 4-40 high strength screws	Included
EHW265	[2] No. 4 washers	Included

Notes

1. Sensitivity measured at 5,000g, except for 2,000g model measured at 2,000g
2. Operating temperatures above 93°C (200°F) result in unpredictable thermal zero shift. TZS should be monitored and/or managed by auto-zeroing to insure no loss in data due to signal saturation.
3. 150°F is the maximum recommended operating temperature with 10 Vdc excitation. In applications requiring higher operating temperatures, lower excitation voltage is recommended.
4. For the 7274 -60K, the over range limit is reduced to 120,00 g when operating at temperatures above 60° C (150° F) and to 60,000 g when operating at temperature above 93° C (200° F).
5. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 866-ENDEVCO for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.
6. Model number definition:



Contact

ENDEVCO

www.endevco.com

Tel: +1 (866) ENDEVCO

[+1 (866) 363-3826]



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. 083119