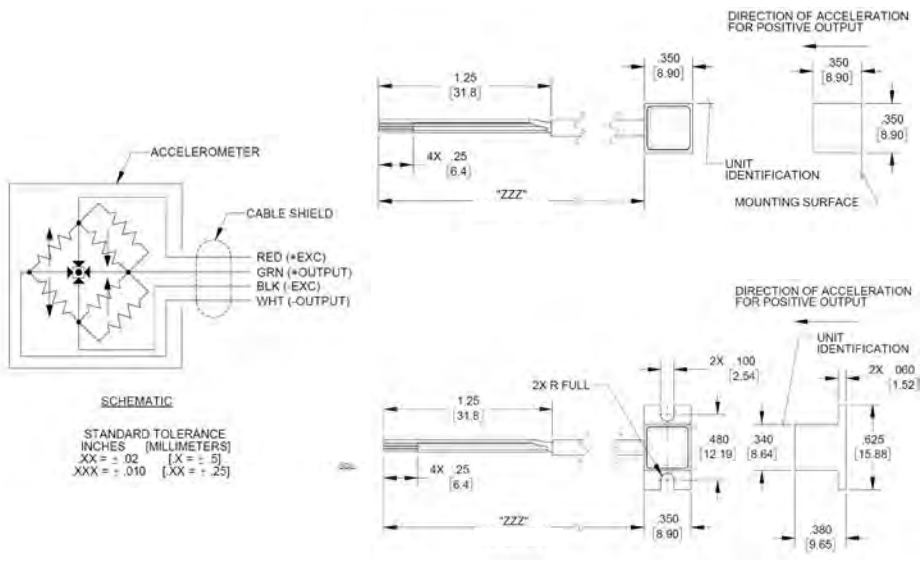
ENDEVCO
AN AMPHENOL COMPANY

Piezoresistive accelerometer

Model 701AH - 701FH



701AH

701FH

multimode DAMPING

Key features

- Flat frequency response
- Rugged housing and cable with 28 AWG conductors
- Survives up to 10,000 g's shock
- ESD protection
- Multi-mode damping

Description

The Endevco® Model 701AH and 701FH are very low mass accelerometers weighing less than 2 grams. These accelerometers are designed for crash testing and similar applications that require minimal mass loading and broad frequency response.

The Endevco Model 701AH and 701FH utilize a unique and advanced micro-machined piezoresistive sensor which includes multi-mode damping for exceptional bandwidth with no significant resonance response in the usable range. This monolithic sensor incorporates the latest MEMS technology for ruggedness, stability and reliability. Endevco's MEMS sensing elements combine high resonance with high output while maintaining exceptional linearity and hysteresis. The accelerometer has a four active arm, full bridge circuit. Piezoresistive sensors, using a simple Wheatstone bridge, retain no intrinsic noise. Endevco's ability to double the output results in an unmatchable signal-to-noise ratio and provides unique resolution capabilities.. Full-scale output is 600 mV nominal with 10 Vdc excitation. With a frequency response extending down to dc (steady state acceleration), this accelerometer is ideal for measuring long duration transient shocks.

The Model 701AH is designed for adhesive mounting for ultimate flexibility when mounting. The Model 701FH is designed for screw mounting with the provided screws.

U.S. Patent 6,988,412 applies.

Piezoresistive accelerometer | Model 701AH - 701FH

All specifications are referenced at +75˚F (+24˚C) and 10 Vdc, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Specifications

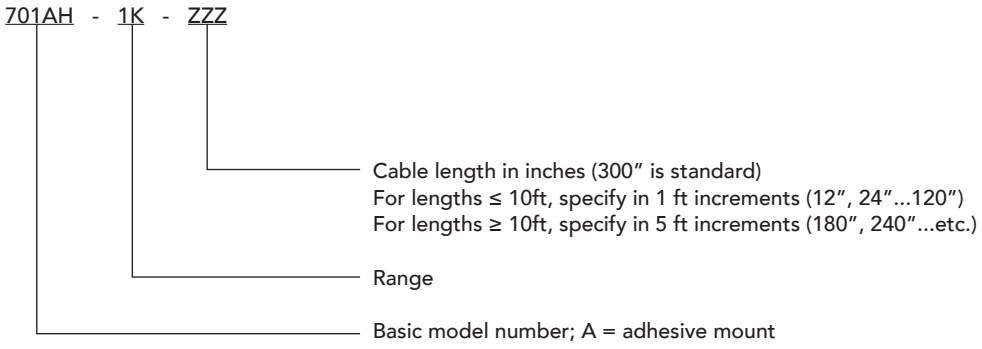
Dynamic characteristics	Units	-1K
Range	g	± 1,000
Sensitivity (at 100Hz and 10g)		
Minimum/Nominal/Maximum	mV/V/g	.015 / .030 / .060
Frequency response (Referenced to 100 Hz)		
± 5% maximum	Hz	0 to 4,000
Non-linearity	%	±1
Zero measurand output (max)	mV	±50
Transverse sensitivity	%	3
Thermal zero shift (typ)		
0° to 50°C	%FSO/°C	0.02
32° to 122°F	%FSO/°F	0.01
Thermal sensitivity shift (typ)		
0° to 50°C	%/°C	0.2
32° to 122°F	%/°F	0.1
Electrical characteristics		
Excitation	Vdc	2.0, 5.0, 10.0
Resistance		
Input	ohms	6,500 ± 2,000
Output	ohms	6,500 ± 2,000
Insulation resistance	Mohms	100 min at 50 Vdc
Physical characteristics		
Case material		Anodized aluminum with stycast fill, black
Electrical connections		Integral 4 conductor, # 28 AWG, ETFE insulated leads shielded with white polyurethane jacket
Mounting		
701AH		Adhesive
701FH		#2-56 socket head cap screws 3.5 in-lbf (0.40 N.m) recommended/4.0 in-lbf (0.45 N.m)
Weight		
701AH		0.05 oz (1.4 gm); cable 0.2 oz/ft (19 gm/m), typical
701FH		0.06 oz (1.7 gm); cable 0.2 oz/ft (19 gm/m), typical
Environmental characteristics		
Acceleration limits		
Shock (half-sine pulse duration)		10,000 g, 80 µsec or longer
Temperature		
Operating		- 40°C to + 100°C (-40°F to + 212°F)
Storage		Room temperature
Humidity		IP67
Calibration data		
Frequency response		10 g, 20 to 4,000, ref 100 Hz
Sensitivity		10 g, 100 Hz at 2, 5 and 10 V
ZMO		At 2, 5 and 10 V
Input and output resistance		

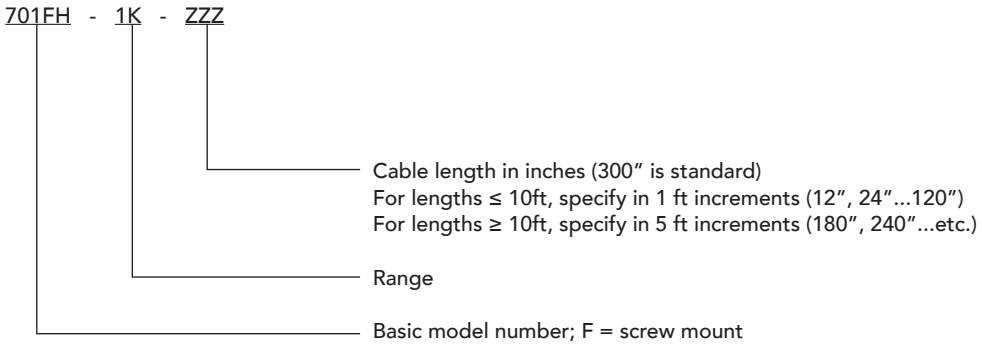
Accessories		
Product	**Description**	**701AH-701FH**
EH136	Screw, socket head, 2-56 x ¼ alloy steel blk oxide (x2)	Included with 701FH
EHM178	Allen wrench, 5/64, (x1)	Included with 701FH

Notes

1. 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.

2. Model number definitions:





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