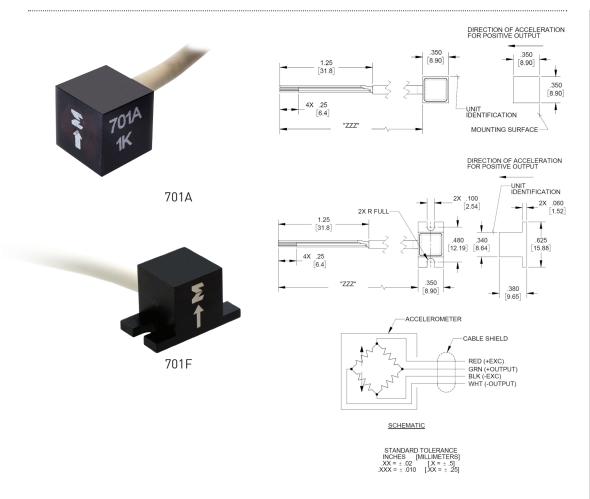


Piezoresistive accelerometer Model 701A - 701F



Model 701A and 701F are small and lightweight piezoresistive accelerometers designed for automotive crash and crush testing. These MEMS accelerometers include mechanical stops and light damping for superior ruggedness in vehicle impact applications. The 701A and 701F feature a full bridge circuit with two active arms and two fixed completion resistors to facilitate shunt calibration. With a frequency response extending down to DC, these accelerometers provide the information needed to measure static acceleration as well as dynamic acceleration.

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

Recommended electronics for signal conditioning and power supply are the Endevco brand model 126 and 136 and model 436, a general purpose three channel DC conditioner and power supply.

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Piezoelectric accelerometers | Piezoresistive accelerometers | IEPE accelerometers | Variable capacitance accelerometers | Piezoresistive pressure sensors | Piezoelectric pressure sensors | High intensity microphones | Inertial sensors | Signal conditioners and supportive instrumentation | Cable assemblies

Key features

- DC response long duration transients
- Mechanical overtravel stops
- Lightly damped
- Small size, rugged
- Crash and shock testing



Piezoresistive accelerometer Model 701A - 701F

Specifications

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.

All specifications are referenced at +/5 F (+24 C) and 10 Vdc, unless other	wise noted. Calibration data, trac	eable to National Institute of Standards and Technology (NIST), is supplied.
Dynamic characteristics	Units	-1K
Range	g	± 1000
Sensitivity (at 100Hz and 10g)	9	_ 1000
Minimum/Nominal/Maximum	mV/V/g	.011/.02/.03
Frequency response (Referenced to 100 Hz)	1111/ 1/g	
± 5% maximum	Hz	0 to 4000
Non-linearity	%	±1
Zero measurand output (max)	mV	±50
Transverse sensitivity	%	3
Thermal zero shift (typ)	70	5
0° to 50°C	%FS0/°C	0.02
32° to 122°F	%FS0/°F	0.02
	70FSU/ F	0.01
Thermal sensitivity shift (typ)	%/°C	0.2
0° to 50°C	,	
32° to 122°F	%/°F	0.1
Electrical characteristics		
Excitation	Vdc	2.0, 5.0, 10.0
Resistance	Vuc	2.0, 3.0, 10.0
Input, minimum	ohms	700
Output, maximum	ohms	3000
Fixed resistors	ohms	$500 \pm 1.0\%$
Insulation resistance	Mohms	100 min @ 50 Vdc
	1410111115	
Physical characteristics		
Case material		Anodized aluminum with stycast fill, black
Electrical connections		Integral 4 conductor, # 28 AWG, Teflon insulated leads
		shielded with white polyurethane jacket
Mounting		
701A		Adhesive
701F		#2-56 socket head cap screws
7011		3.5 in-lbf (0.40 N.m) recommended/4.0 in-lbf (0.45 N.m)
Weight		5.5 In the (0.40 M.M) recommended/4.0 In the (0.40 M.M)
701A		0.05 oz (1.4 gm); cable 0.2 oz/ft (19 gm/m), typical
701F		0.06 oz (1.7 gm); cable 0.2 oz/ft (19 gm/m), typical
, o i i		0.00 02 (1.7 gm), cubic 0.2 02/1 (17 gm/m), typicat
Environmental		
Acceleration limits		
Shock (half-sine pulse duration)		10000 g, 80 µsec or longer
Temperature		
Operating		- 40°C to + 100°C (-40°F to + 212°F)
Storage		Room temperature
		Room temperature
		IP67
Humidity		IP67
		IP67
Humidity		IP67 10 g, 20 to 4,000, ref 100 Hz at 10 V
Humidity Calibration		10 g, 20 to 4,000, ref 100 Hz at 10 V
Humidity Calibration Frequency response		



Piezoresistive accelerometer Model 701A - 701F

Accessories

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

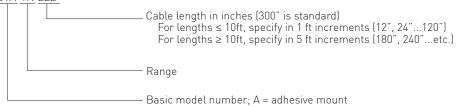
Contact

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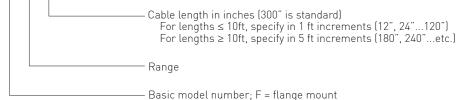
Notes

- 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 definition:

701A-1K-ZZZ



701F-1K-ZZZ





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. 083019