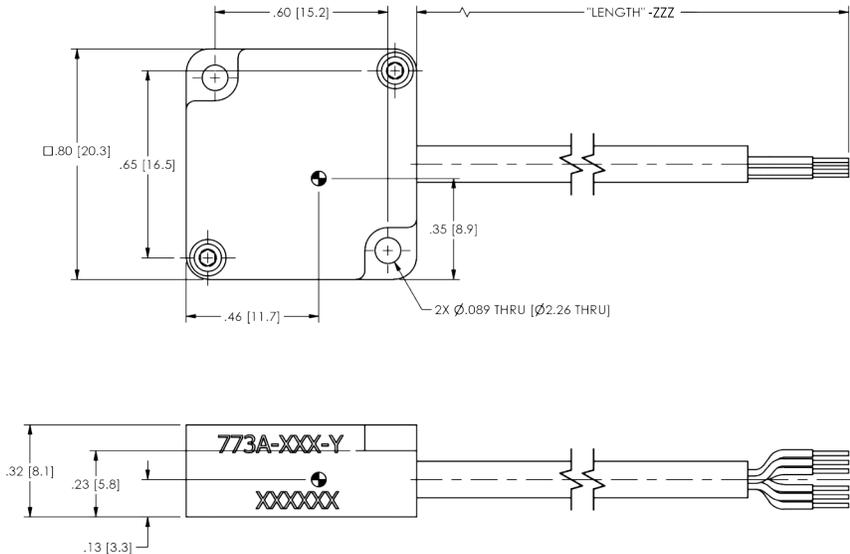


ENDEVCO Triaxial Variable Capacitance Accelerometer Model 773A



Key Features

- 8, 15, 50, 100 and 200 g ranges
- Stackable with Endevco Model 7330 to create a 6DoF Sensor
- Differential or single-ended operation
- Rugged aluminum housing with integral cable
- Operating temperature from -40° C to 125°C

Description

The ENDEVCO® Model 773A is a triaxial DC response accelerometer that utilizes unique variable capacitance MEMS sensors. This accelerometer is designed for measurement of relatively low level accelerations in automotive and aerospace applications. The 773A is designed to be stackable with Endevco Model 7330 to create a Modular 6DoF sensor.

The 773A accelerometer is available with a choice of two power options. One option (U) allows for operation from 7V to 36V. The second option (R) allows for operation at a regulated excitation voltage of 5V. The accelerometer provides differential output or single-ended output with a 2.5V output bias voltage.

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The following performance specifications 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.

Specifications						
Dynamic						
	Units	-8	-15	-50	-100	-200
Range	g	±8	±15	±50	±100	±200
Sensitivity	mV/g	250	133	40	20	10
		±10	±5	±2	±1.0	±1.0
Frequency response (±5%, ref 100 Hz) max	Hz	0-450	0-450	0-750	0-1200	0-1200
Frequency response (±1dB, ref 100 Hz) typical	Hz	0-1000	0-1500	0-1800	0-2000	0-2000
Frequency response (±3dB, ref 100 Hz) typical	Hz	0-1200	0-2500	0-3000	0-5000	0-5000
Zero measurand output, single-ended	mV	2500 ±75	2500 ±75	2500 ±75	2500 ±75	2500 ±75
Zero measurand output, differential	mV	±75	±75	±75	±75	±75
Transverse sensitivity	%	3	3	3	3	3
Thermal zero shift (max) -40°C to +100°C (-40°F to 212°F)	%FSO [2]	±2.0	±2.0	±2.0	±2.0	±2.0
Thermal sens shift (max) -40°C to +100°C (-40°F to 212°F)	%	±2.0	±2.0	±2.0	±2.0	±2.0
Combined non-linearity (BFSL) and hysteresis	%FSO	±0.5	±0.5	±0.5	±0.5	±0.5
Natural frequency, typ						
X axis	Hz	4800	4800	8000	14000	14000
Y axis	Hz	4800	4800	8000	14000	14000
Z axis	Hz	3500	3500	6000	10500	10500
Threshold (resolution) [3]	equiv. g's.	0.0016	0.003	0.01	0.02	0.04
Electrical						
Excitation voltage		5 Vdc (Regulated 5V supply required; Maximum 7V without damage)				
For option "R" supply voltage		7 to 36 Vdc (Maximum 45V without damage)				
For option "U" supply voltage		14mA max				
Current drain		100 ohms max				
Output impedance		10K ohms resistance minimum				
Load		50 pF capacitance maximum				
Residual noise		100 µVrms typ, 200 µVrms max; 0.5 Hz to 100 Hz				
		500 µVrms typ, 1.0 mVrms max; 0.5 Hz to 10 kHz				
Input voltage protection		Reverse polarity protected (for "U" option only)				
Insulation resistance		100 Meg Ohms minimum at 50 Vdc				
Case to leads shorted together						
Shield to leads shorted together						
Physical						
Weight (typical)		9 grams (without cable) plus cable at 20 grams/meter				
Case material		Anodized aluminum alloy				
Cable type		Integral 8 conductor, 28 AWG PFA insulated leads, SPC Shield, black PFA jacket,				
OD 0.128" max						
Mounting/torque		Mounting 2x #2-56 Screws / 2 lb-in (0.23 N-m)				
Environmental						
Shock Limit		10000g (0.15 mS haversine pulse)				
Temperature						
Operating Range		-40°F to +257°F (-40°C to +125°C) [4]				
Storage Range		-40°F to +257°F (-40°C to +125°C)				
Humidity		IP67				
Calibration Data						
Sensitivity		Measured at 1g and 100Hz for the -8; Measured at 10g and 100Hz for all other ranges				
Frequency response		Measured at 1g, 20 to 1000Hz for the -8; Measured at 10g, 20 to 5,000Hz for all other ranges				
Zero measurand output		Measured at room temperature				

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Accessories

Product	Description	773A
EDVEH597	2-56 Socket Head Cap Screw, 1/2" length, 2x	Included
EDVEHW200	Washer, 2x	Included
EDVEHM178	Hex Wrench	Included
7973	Adhesive Mounting Plate	Optional

Notes

1. Maintain high levels of precision and accuracy using Endeveco's factory calibration services. Call Endeveco'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. Full scale output (FSO) is nominally 4 volts
3. Threshold = [2x Max residual noise, .5 to 100Hz] / sensitivity
4. Sensor can function for limited excursions to -55 °C, but is not rated for continuous operation at that temperature.

Model number definition:

