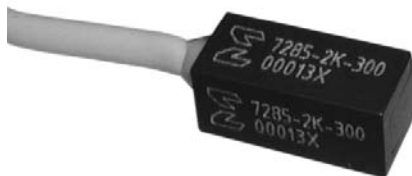


## Model 7285 Piezoresistive accelerometer

### Features

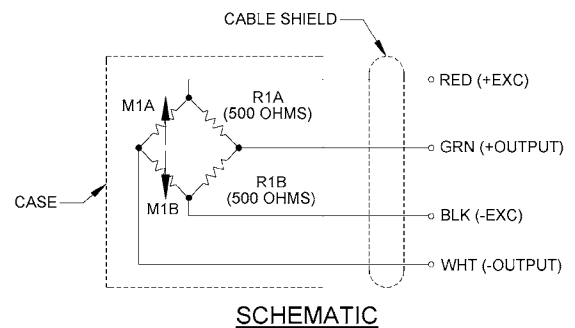
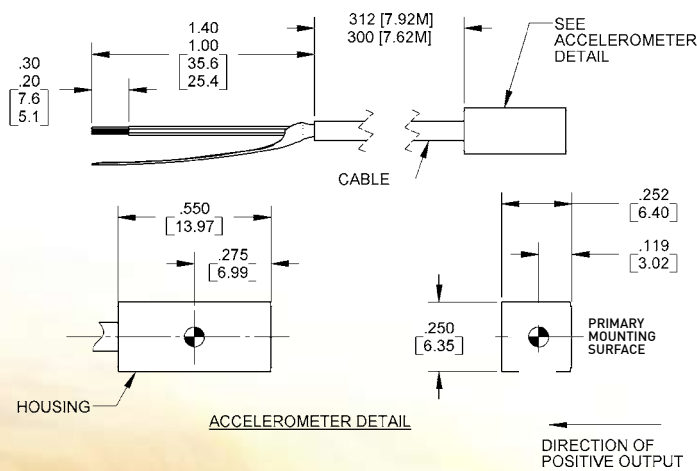
- Small size, rugged
- Crush zone testing
- 2000 g full scale range
- DC response - long duration transients



### Description

The Endevco® Model 7285 is a very low mass piezoresistive accelerometer weighing less than 1 gram. This accelerometer is designed for crash testing in vehicle crush zone applications. It is very economical to acquire and own, reducing the overall cost of instrumentation. This unit has been designed and assembled using decades of experience that Endevco has acquired building sensors for the crash industry. As a result, the reliability of the 7285 ensures that critical data is recorded when needed at very low cost.

The model 7285 utilizes a micro-machined sensor which includes integral mechanical stops. This monolithic sensor offers ruggedness, stability and reliability. The Model 7285 has minimum damping, thereby producing no phase shift over the useful frequency range. With a frequency response extending down to dc (steady state acceleration) this accelerometer is ideal for measuring long duration transient shocks. The performance specification is the ideal match for crush zone installations.



STANDARD TOLERANCE  
INCHES (MILLIMETERS)  
.XX = ± .02 (X = ± .5)  
.XXX = + .010 (.XX = + .25)

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# Model 7285 Piezoresistive accelerometer

Endevco

## SPECIFICATIONS

	Units	7285-2K-300
RANGE	g	±2000
SENSITIVITY (at 100 Hz & 10g)	mV/g Typ (Min)	0.20 (0.12)
FREQUENCY RESPONSE (±10% max, ref. 100 Hz)	Hz	0 to 4000
MOUNTED RESONANCE FREQUENCY	Hz Typ	>20 000
DAMPING RATIO	Max	0.005
NON-LINEARITY (% of reading, to full range)	% Max	±1
TRANSVERSE SENSITIVITY	% Typ	3%
ZERO MEASURAND OUTPUT	mV	±25 to ±50
THERMAL ZERO SHIFT	mV Typ	±10
From 0°F to +150°F (-18°C to +66°C), ref 75°F(24°C)	mV Max	±25
THERMAL SENSITIVITY SHIFT	%/°F Typ	- 0.06
From 0°F to +150°F (-18°C to +66°C)	%/°C Typ	-0.10
From 65°F to +85°F (+18°C to +29°C), ref 75°F(24°C)	±% Typ	1.0
WARM-UP TIME	ms Max	1
BASE STRAIN SENSITIVITY (Per ISA 37.2 @ 250 μ strain)	Equiv. g's	< 0.1
MECHANICAL OVERTRAVEL STOPS	g's	5000 g typical, 2500 g minimum

### ELECTRICAL

EXCITATION	10 Vdc
INPUT RESISTANCE [1]	500 ohms nominal
OUTPUT RESISTANCE [1]	500 ohms nominal
INSULATION RESISTANCE	100 megohms minimum at 100 Vdc; leads to case, leads to shield, shield to case

### PHYSICAL

CASE, MATERIAL	Blue Anodized aluminum alloy
ELECTRICAL, CONNECTIONS	Integral cable, four conductor No. 32 AWG Teflon® insulated leads, braided shield, silicone jacket
MOUNTING	Adhesive mount
WEIGHT	<1 gram (cable weighs 9 grams/meter)

### ENVIRONMENTAL

ACCELERATION LIMITS (in any direction)	
Static	10 000 g
Sinusoidal Vibration	1000 g pk below 5kHz
Shock (half-sine pulse duration)	10 000 g, 200 μsec or longer
TEMPERATURE	
Operating	0°F to +150°F (-18°C to +66°C)
Storage	-65°F to +250°F (-54°C to +121°C)
HUMIDITY	Unit is epoxy sealed
ALTITUDE	Unaffected

### CALIBRATION DATA SUPPLIED [3]

SENSITIVITY (at 100 Hz and 10 g pk, 10 Vdc)	mV/g
FREQUENCY RESPONSE	% Error @ 20, 200, 4000Hz, % deviation reference 100Hz
ZERO MEASURAND OUTPUT	mV @ 10 Vdc
INPUT AND OUTPUT RESISTANCE	Ohms

### NOTES

1. Measured at approximately 1 Vdc.
2. The safety sleeve should be kept on unit when not in use to prevent possible handling damage.
3. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 800-982-6732 for recommended intervals, pricing and turn around time for these services as well as for quotations on our standard products.

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.

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extreme environments