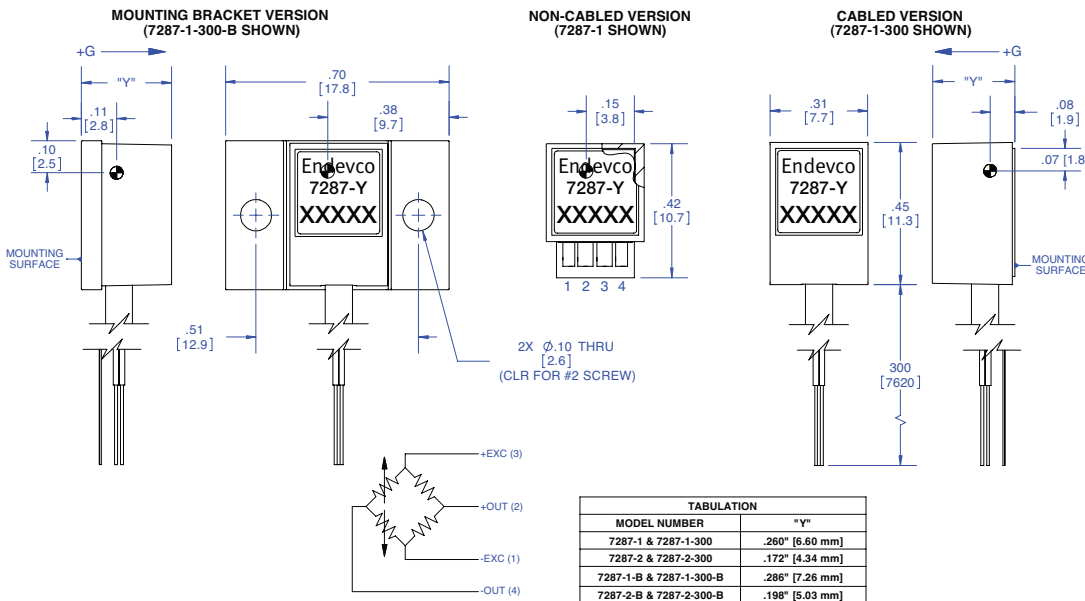
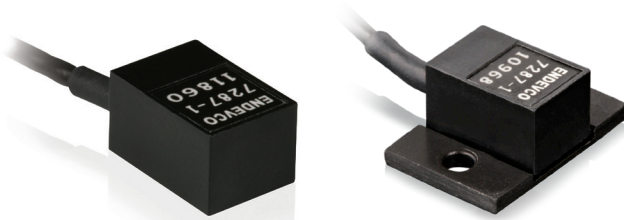


Piezoresistive accelerometer

Model 7287



Key features

- Small size, rugged
- Crush zone testing
- 2000 g full scale range
- DC response - long duration transients
- Offered with cable or solder pads
- Adhesive or bolt mount options

The Endeveco® model 7287 is a very low mass piezoresistive accelerometer weighing less than 1 gram. This accelerometer is designed for crash testing in vehicle crush zone applications, where reuse is not expected. 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 Endeveco has acquired building sensors for the crash industry. As a result, the reliability of the 7287 ensures that critical data is recorded when needed at very low cost.

The model 7287 utilizes a micro-machined sensor which includes integral mechanical stops. This monolithic sensor offers ruggedness, stability and reliability. The model 7287 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. The '-B' option allows the 7287 to be bolt mounted with use of an integral mounting bracket.

Piezoresistive accelerometer

Model 7287

Specifications

	Units	7287
Range	g	±2000
Sensitivity (at 100 Hz & 10g)	mV/g Typ (Min)	0.20 (0.10)
Frequency response (±5% max, ref. 100 Hz)	Hz	0 to 4000
Mounted resonance frequency	Hz Typ	>20 000
Damping ratio (Typ)		0.005
Non-linearity (% of reading, to full range)	% Max	±1
Transverse sensitivity	% Typ	3%
Zero measurand output	mV	±100 max
Thermal zero shift from 10 °C to 30 °C	mV Typ mV Max	±2 ±25
Thermal sensitivity shift 0 °F to +150°F [-18°C to +66°C]	%/ °F Typ %/ °C Typ	-0.06 -0.10
Mechanical overtravel stops	g's	5000 g typical
Electrical		
Excitation	10 Vdc	
Input resistance (1)	450–1100 ohms	
Output resistance (1)	450–1100 ohms	
Insulation resistance	100 megohms minimum at 50 Vdc; leads to case, leads to shield, shield to case	
Physical		
Case, material	Plastic	
Bracket, material (if applicable)	Anodized aluminum alloy	
Electrical, connections	Integral cable, four conductor No. 32 AWG polyethylene insulated leads, braided shield, PVC jacket (if selected)	
Mounting 7287-Y-ZZZ 7287-Y-ZZZ-B [4]	Adhesive mount Screw mount, 2 X #2 self-tapping screws are supplied	
Weight	<1 gram (cable weighs 6 grams/meter) (bracket weighs 0.7 grams)	
Environmental		
Acceleration limits (in any direction)		
Static	10 000 g	
Shock (half-sine pulse duration)	10 000 g, 200 µsec or longer	
Temperature		
Operating	10 °C to 30 °C	
Storage	-18 °C to 66 °C	
Calibration data supplied		
Sensitivity (at 100 Hz and 10 g pk, 2 Vdc)	mV/g	
Range	g	
Zero measurand output	mV @ 10 Vdc	

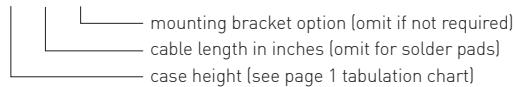
Piezoresistive accelerometer

Model 7287

Notes:

1. Measured at approximately 1 mA.
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 866-ENDEVCO for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.
4. Recommended pilot drill size is #49; based on industry standard data.
Recommended mounting torque is 5 lbf-in (0.57 N-m).
5. When ordering specify the model number as follows:

7287-Y-300-B



Contact

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