*piezo*PAK® Accelerometer

ENDEVCO MODEL 56

Model 56

- **Low-Cost / OEM Applications**
- **10 mV/g or 100 mV/g**
- **+10 to +24 Vdc, +2 to 10 mA constant current**
- **X, Y or Z - Axis Sensitivity**
- **Custom Packaging Available**

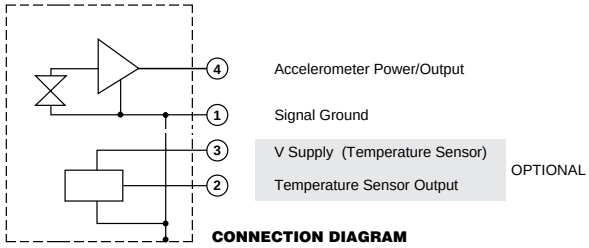
Actual size

DESCRIPTION Model

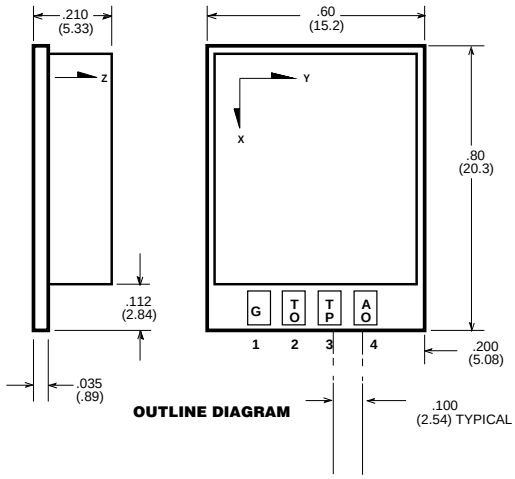
The Endevco Model 56 piezoPAK is a low-cost IEPE piezoelectric accelerometer designed for high-volume procuction and high-performance vibration measurement of machines, structures or vehicles. The Model 56 offers a wide frequency response, high shock survivability and low noise. The unit is sealed against environmental contamination, shielded, ground isolated and configured with four solder pads for power and signal connection. Endevco can also package the piezoPAK into customized housings allowing for a variety of cable/connector options.

The Model 56 piezoPAK offers 10 mV/g or 100 mV/g sensitivity with x, y or z-axis sensitivity available as standard configurations. Signal ground is connected to the cover and an internal shield. The unit requires a supply voltage of +10 to +24 Vdc with a constant current supply of +2 to 10 mA. Output bias and the peak linear output signal are 6.6 - 7 Vdc and 2 Vpeak, respectively.

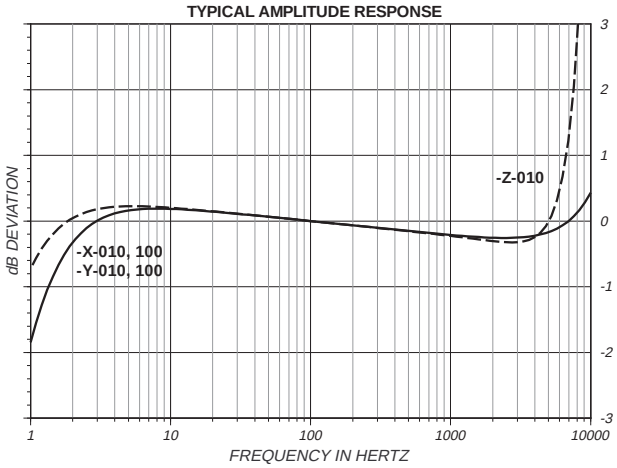
An optional temperature sensor with a linear output of 10mV/°C is also available and is specified by the "T" option in the model number designation. The temperature sensor has a separate power input and requires a voltage of +4.5 to +10 Vdc. At 0°C the unit has a +500mV bias.



CONNECTION DIAGRAM



OUTLINE DIAGRAM



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SPECIFICATIONS

The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+12°C), +12 Vdc power, 4mA current supply, and 100 Hz, unless otherwise noted.

DYNAMIC CHARACTERISTICS	Units	-Z-010	-X-010 -Y-010	-X-100 -Y-100
RANGE	g	+/-200	+/-200	+/-20
VOLTAGE SENSITIVITY	mV/g	10	10	100
FREQUENCY RESPONSE			See Typical Curve	
RESONANCE FREQUENCY	kHz	11	30	30
AMPLITUDE RESPONSE ±1dB	Hz	1 to 5 000	1 to 10 000	1 to 10 000
TEMPERATURE RESPONSE				
at -40°F (-40°C) typical	%		+3.5	
at +257°F (+125°C) typical	%		- 3.7	
TRANSVERSE SENSITIVITY	%		≤ 5	
AMPLITUDE LINEARITY	%		≤ 1	

ELECTRICAL CHARACTERISTICS				
SUPPLY VOLTAGE	Vdc		+10 to +24	
SUPPLY CURRENT	mA		+2 to +10	
WARM-UP TIME	sec		3	
OUTPUT POLARITY (see outline drawing)		+z	+x, +y	+x, +y
DC OUTPUT BIAS VOLTAGE	Vdc		+6.6 to +7.0	
-40°F to +257°F (-40°C to +125°F)	Vdc		+4.0 to +7.0	
OUTPUT IMPEDANCE	Ω			
(3mA to 10mA supply current)			≤ 100	
(2mA to 3mA supply current)			≤ 300	
FULL SCALE OUTPUT VOLTAGE	V		±2	

ENVIRONMENTAL CHARACTERISTICS		
TEMPERATURE RANGE		-40°F to +257°F (-40°C to +125°C)
SINUSOIDAL VIBRATION LIMIT	g pk	500
SHOCK LIMIT	g pk	5000

RESOLUTION				
10 Hz	µg/ √Hz	100	100	10
100 Hz	µg/ √Hz	20	20	2.3
1000 Hz	µg/ √Hz	10	10	1.2
Broadband (2 Hz to 10 kHz)	µg rms	900	900	120

PHYSICAL CHARACTERISTICS				
DIMENSIONS			See Outline Drawing	
WEIGHT	oz (gm)	0.08 (2.2)	0.10 (2.8)	0.16 (4.4)
CASE MATERIAL			Ceramic Base / Stainless Steel Cover	
CONNECTION			4 Pin edge-connection	

TEMPERATURE SENSOR (T OPTION)		
SENSITIVITY	mV/°C	10
SUPPLY VOLTAGE	Vdc	+4.5 to +10
SUPPLY CURRENT	µA	130
ACCURACY		
at +75°F (+24°C)	°C	±3
at -40°F to +257°F (-40°C to +125°F)	°C	±4

CALIBRATION	
SUPPLIED:	
SENSITIVITY	mV/g

PART NUMBERING AND ORDERING

56 - __ __ - __ __ __

SENSITIVITY: 010 = 10 mV/g, 100 = 100 mV/g

TEMPERATURE SENSOR OPTION: T for temp. sensor, otherwise leave blank

SENSITIVE AXIS: X = +x positive output
Y = +y positive output
Z = +z positive output

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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