

Biaxial IEPE accelerometer

Description

Model 529A is a low noise IEPE biaxial accelerometer permitting simultaneous low frequency seismic measurements. 529A features shear ceramic crystal which exhibits excellent output stability over time. The accelerometer incorporates an internal circuit with TEDS(optional) in a two-wire IEPE system which transmits its low impedance voltage output through the same cable that supplies the constant current power. Signal ground is insulated to the outer case of the unit. Polarity inversion protection for the amplify circuit is inherent in the circuit design. The welded titanium construction provides a lightweight hermetic housing. The miniature 1/4-28 4-pins glass insulated connector provides long-term stability over the operating temperature range. In addition to adhesive mounting, the 529A can be mounted by clips for easily replacement. The 529A provides low frequency response, which is ideal for light vibration and seismic measurement especially for precise equipment and heavy structures testing. Senter's model 13M4-3 is a 4-pins to BNC x3 breakout cable for sensor mating.

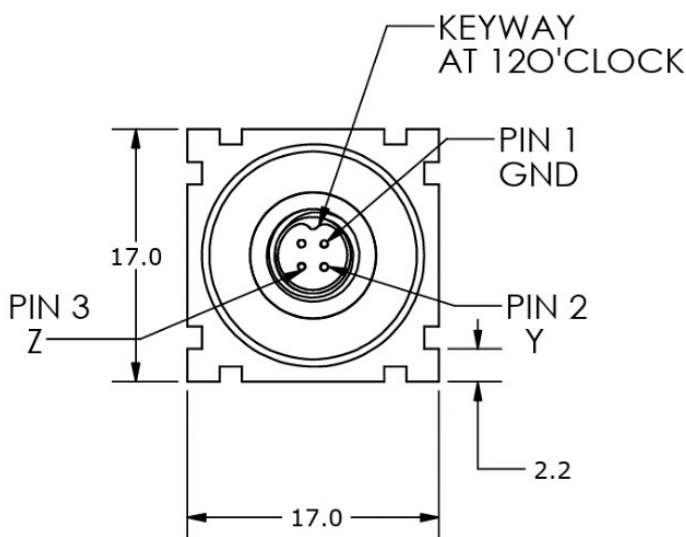
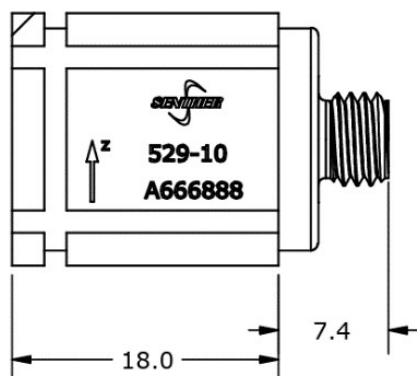
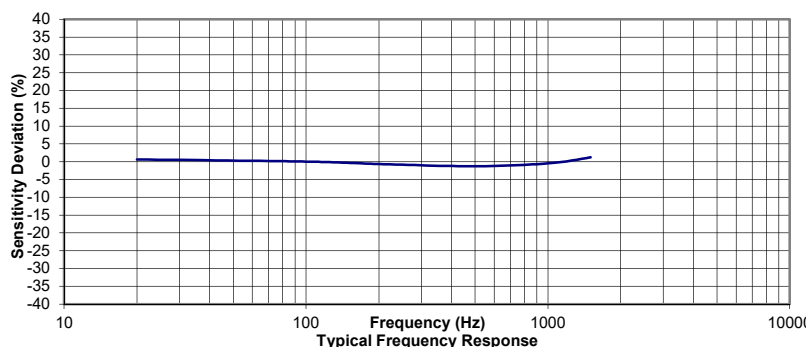
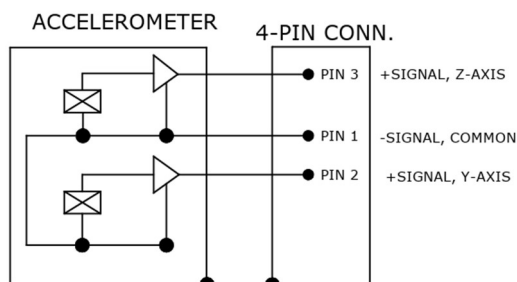


Features

- High resolution signal
- Adhesive or clips mounting
- Hermetic seal
- Low frequency response
- Wide temperature range
- Wide frequency response

Application

- Micro-seismic monitoring
- Flight testing
- Automotive testing
- Modal analysis
- Structural measurements



Specification

Typical at +24°C (+75°F), 24Vdc, 4 mA and 100Hz, unless otherwise stated.

Part Number	-10	
Measurement Range	10	g
Sensitivity $\pm 10\%$	500	mV/g
Frequency Range $\pm 10\%$	0.3-2000	Hz
Resonant Frequency	7	kHz
Phase Response $\pm 4^\circ$	2 - 2.5K	Hz
Transverse Sensitivity	<5	%
Temperature response -50 to +100°C	± 10	% max.
Spectral Noise	10Hz: 1.3 100Hz: 0.26 1000H: 0.13	ug/ $\sqrt{\text{Hz}}$
Non-Linearity	± 1	% FSO
Shock Limit	± 2000	g pk
Warm-up Time	<5	Seconds
Weight (Excluding Cable)	24	Grams







PARAMETERS	VALUE	UNITS
Bias Voltage (Room Temp.)	8-12	Vdc
Bias Voltage (-50~100) °C	6-13	Vdc
Output Impedance	<50	Ω
Full Scale Output Voltage	± 5	V
Insulation Resistance	>100	M Ω
Magnetic Sensitivity (50Hz, 0.038T)	<1	ms ⁻² /T
Supply Voltage	18-30	VDC
Supply Current	2 to 10	mA
Operating and Storage Temperature	-50~+100	°C
Sensing Element	Piezo Ceramic	
Sensing Geometry	Shear	
Housing Material	Titanium alloy	
Sealing	Welded Hermetic(IP67)	
Grounding	Case Isolated (Internally Shielded)	
Mounting Torque	2.2(19.5)	N-m(lb-in)

Accessories

Calibration certificate included.

Part Number	Description	Availability
MB00XX	Adhesive mounting adapter	Optional
13M4-3	3 meter mating cable with 4 pins mating connector to 3X BNC(male) connector	Optional
IN-03	3 channels IEPE signal conditioner	Optional
IN-91	Portable vibration analyzer	Optional
IN-3062	8 channels data acquisition system	Optional

Measurement configuration

Sensor	Mating cable	Signal conditioner	BNC cable	Data acquisition	Computer
					

Ordering information

529	A	-	10
Model	Output signal	-	Range
529	A=IEPE output	-	10=10g 50=50g

