

Single axial shock accelerometer



Description

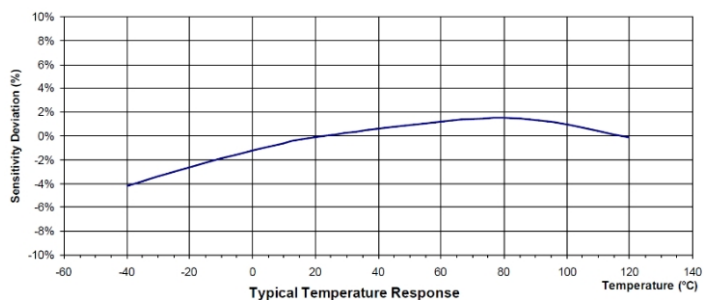
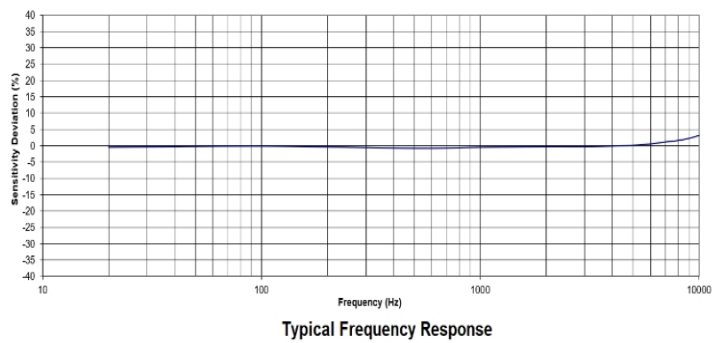
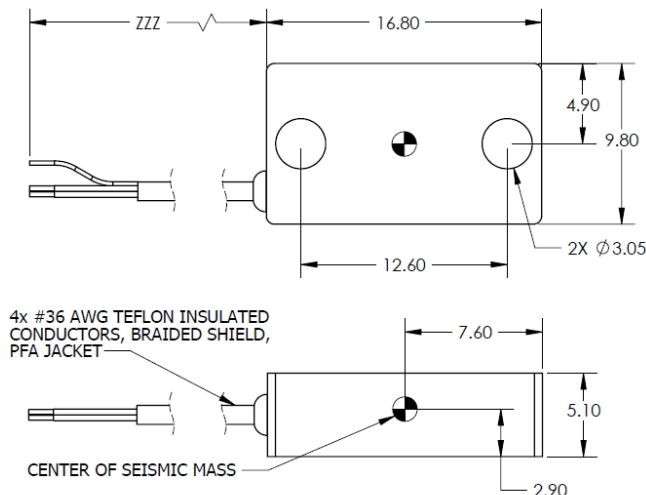
Model 519A is an IEPE single axial accelerometer permitting simultaneous shock and vibration measurements. 519A features an annular shear ceramic crystal which exhibits excellent output stability over time. The accelerometer incorporates an internal circuit in a two-wire IEPE system which transmits its low impedance voltage output through the same cable that supplies the constant current power. Signal ground is connected to the outer case of the unit. Isolated mounting plate are available by option. Polarity inversion protection for the amplify circuit is inherent in the circuit design. The welded stainless-steel construction provides a lightweight hermetic housing. Integrated lightweight cable provides reliability measurement and long-term stability over the operation. In addition to adhesive mounting, the 519A has $\varnothing 3.05 \times 2$ through holes for screw mounting on the test object. The 519A provides wide frequency response, which is ideal for shock testing especially for lightweight structures and instant impact.

Features

- Miniature Size
- Screw mounting
- Hermetic seal
- Annular shear mode
- Wide temperature range
- Wide frequency response

Application

- Shock testing
- Explode research
- Armor analysis
- Aircraft testing



Specification

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

Part Number	-10K	-20K	-50K	
Measurement Range	10000	20000	50000	g
Sensitivity ±20%	0.5	0.25	0.1	mV/g
Frequency Range ±5%	5-9000	5-9000	5-9000	Hz
Frequency Range ±10%	3-12000	3-12000	3-12000	Hz
Frequency Range ±3dB	1-15000	1-15000	1-15000	Hz
Resonant Frequency	50	50	50	kHz
Transverse Sensitivity	<5	<5	<5	%
Temperature response, -55 to +125°C	±10	±10	±10	% max.
Broadband Resolution	0.1	0.2	0.5	Equiv. g RMS
Non-Linearity	±2	±2	±2	% FSO
Shock Limit	±20000	±30000	±60000	g pk
Weight (Excluding Cable)	5.6	5.6	5.6	Grams

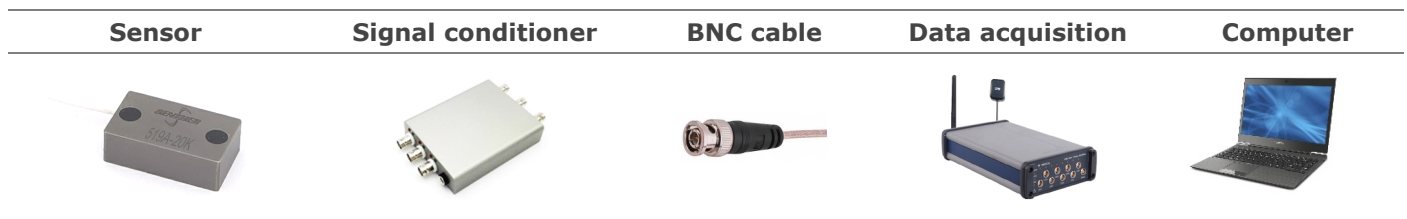
PARAMETERS	VALUE	UNITS
Bias Voltage (Room Temp.)	8-12	Vdc
Bias Voltage (-50~125) °C	6-13	Vdc
Output Impedance	<100	Ω
Full Scale Output Voltage	±5	V
Insulation Resistance	>100	MΩ
Supply Voltage	18-30	VDC
Supply Current	2 to 10	mA
Operating and Storage Temperature	-50~+125	°C
Sensing Element	Piezo Ceramic	
Sensing Geometry	Shear	
Housing Material	Stainless Steel	
Sealing	Welded Hermetic	
Grounding	Signal return connected to case	

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0135	M3x8 mounting screw	2pcs Included
IN-03	3 channels IEPE signal conditioner	Optional
IN-91	Portable vibration analyzer	Optional
IN-3062	8 channels data acquisition system	Optional

Measurement configuration



Ordering information

519	A	-	10K	-	3
Model	Output signal	-	Range	-	Cable length
519	A=IEPE output	-	10K=10000g 20K=20000g 50K=50000g	-	3= 3 meters 6= 6 meters



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