

Internally shielded IEPE accelerometer



Features

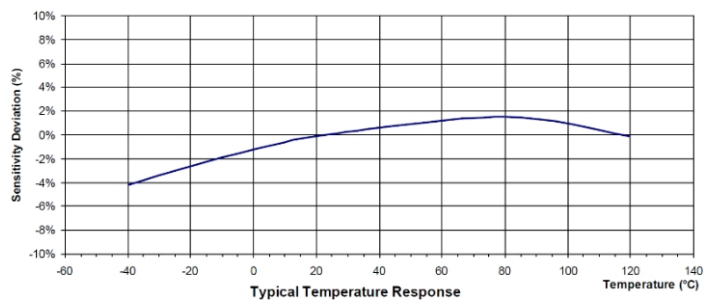
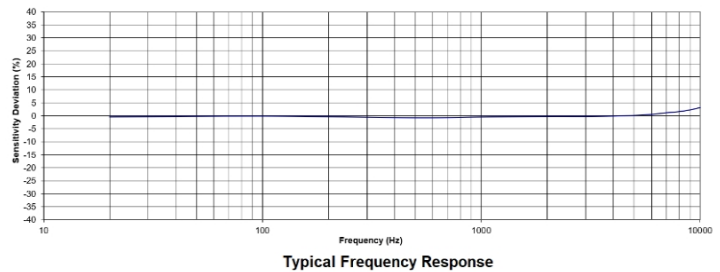
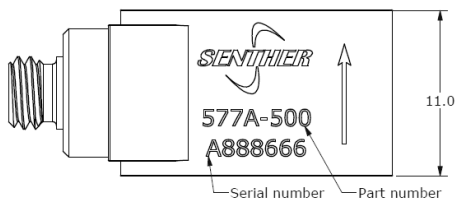
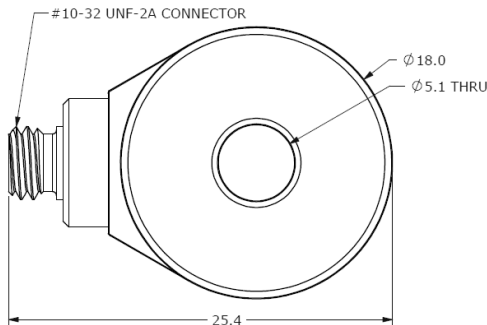
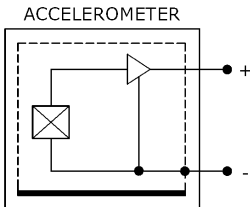
- Super frequency response
- Housing isolated
- Through hole mount
- Side connector output
- Adhesive or screw mounting
- Annular shear mode
- Wide temperature range

Application

- Vibration monitoring
- Shock testing
- Road testing
- Modal analysis
- Aircraft testing

Description

Model 577A is an IEPE single axial accelerometer permitting simultaneous shock and vibration measurements. 577A 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 internally shielded and isolated from the housing. Polarity inversion protection for the amplify circuit is inherent in the circuit design. The welded stainless-steel construction provides a strong hermetic housing. The isolated 10-32 glass insulated connector provides long-term stability over the operating temperature range. In addition to adhesive mounting, 577A has $\varnothing 5.1$ through holes for screw mounting on the test object. The cable outgoing direction can be discretionary for install convenience. 577A provides extreme wide frequency response, which is ideal for dynamic vibration and shock measurement especially for HUMS application. Senter's model 11-3 is a 10-32 to BNC breakout cable for the sensor.



Specification

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

Part Number	-50	-100	-500	
Measurement Range	50	100	500	g
Sensitivity ±10%	100	50	10	mV/g
Frequency Range ±5%	4-7000	3-7000	1-7000	Hz
Frequency Range ±10%	2-20000	2-20000	1-20000	Hz
Frequency Range ±3dB	1-25000	1-25000	0.5-25000	Hz
Resonant Frequency	>49	>49	>49	kHz
Transverse Sensitivity	<5	<5	<5	%
Temperature response -55 to +125°C	±10	±10	±10	% max.
Broadband Resolution	0.0004	0.0005	0.0012	Equiv. g RMS
Non-Linearity	±1	±1	±1	% FSO
Shock Limit	±5000	±5000	±5000	g pk
Weight (Excluding Cable)	16.0	16.0	16.0	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	Case Isolated (Internally Shielded)	

Accessories

Calibration certificate included.

Part Number	Description	Availability
PM0503	M5x16 socket head cap mounting screw	One screw Included
PM0428	#10-32x5/8 socket cup head screw	
11-3	3 meter mating cable with 10-32(male) to BNC(male) connector	Optional
10-3	3 meter mating cable with 10-32(male) to 10-32(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



Ordering information

577	A	-	50	-	A
Model	Output signal	-	Range	-	Mounting screw
577	A=IEPE output	-	50=50g 100=100g 500=500g	-	A=#10-32x5/8 socket cup head screw B=M5x16 socket cup head screw



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