573A

Low noise IEPE accelerometer

Description

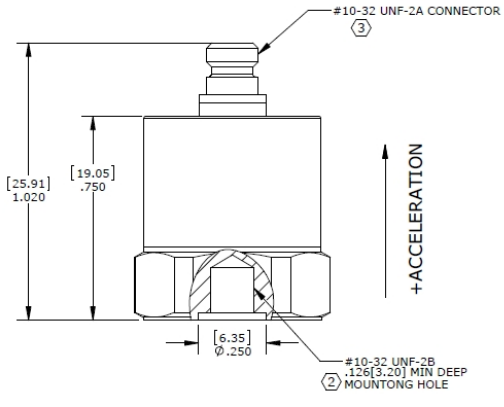
Model 573A is a low noise IEPE single axial accelerometer permitting simultaneous shock and vibration measurements. 573A features an annular shear ceramic crystal which exhibits excellent output stability over time. The accelerometer incorporates an internal circuit with TEDS(optional) in a two-wire IEPE system which transmits its low impedance voltage output through the same cable that supplies the constant current power. Signal ground is connected to the outer case of the unit. Isolated mounting studs or housing are available. Polarity inversion protection for the amplify circuit is inherent in the circuit design. The welded stainless-steel construction provides a lightweight hermetic housing. The miniature 10-32 glass insulated connector provides long-term stability over the operating temperature range. In addition to adhesive mounting, the 573A has 10-32 threaded holes for stud mounting on the test object. The 573A provides wide frequency response, which is ideal for dynamic vibration and shock measurement especially for lightweight structures and drop testing for the packaging industry. Senther's model 11-3 is a 10-32 to BNC breakout cable for the sensor.

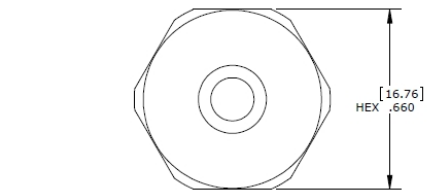
Features

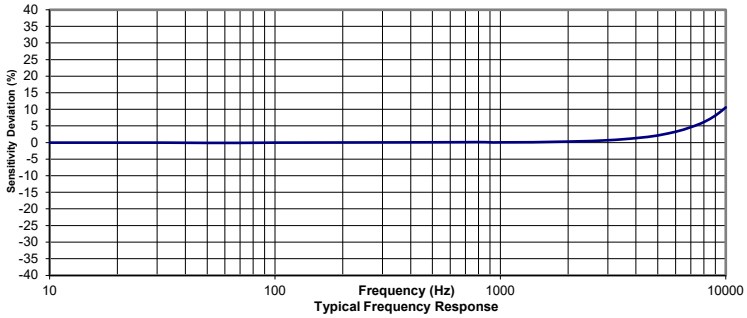
- High resolution signal
- Adhesive or stud mounting
- Hermetic seal
- Annular shear mode
- Wide temperature range
- Wide frequency response

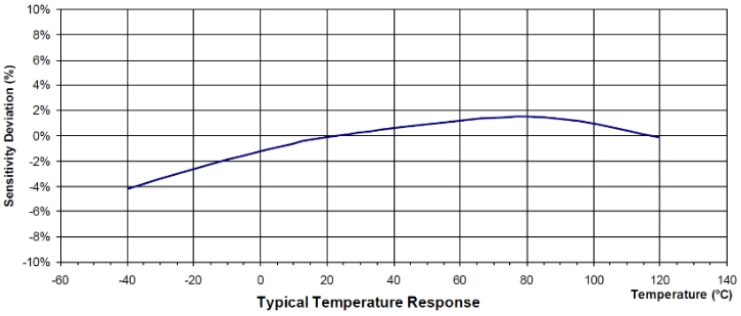
Application

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









Specification

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

Part Number	-5	-10	-25	-50	-100	
Measurement Range	5	10	25	50	100	g
Sensitivity ±10%	1000	500	200	100	50	mV/g
Frequency Range ±5%	1-5000	0.8-5000	0.6-5000	0.5-5000	0.5-6000	Hz
Frequency Range ±10%	0.6-8000	0.5-8000	0.4-8000	0.3-8000	0.3-9000	Hz
Frequency Range ±3dB	0.3-12000	0.2-12000	0.1-12000	0.1-12000	0.1-12000	Hz
Resonant Frequency	32	32	32	32	32	kHz
Transverse Sensitivity	<5	<5	<5	<5	<5	%
Temperature response -55 to +125°C	±10	±10	±10	±10	±10	% max.
Broadband Resolution	0.00007	0.0001	0.0002	0.00025	0.0005	Equiv. g RMS
Non-Linearity	±1	±1	±1	±1	±1	% FSO
Shock Limit	±4000	±4000	±4000	±4000	±4000	g pk
Weight (Excluding Cable)	12	12	12	12	12	Grams

PARMETERS	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
PM0231	Mounting stud 10-32 to 10-32 thread	One stud Included
PM0356	Mounting stud 10-32 to M5 thread	
MB0014	Magnet mounting adapter	Optional
PM0276	Adhesive mounting adapter	Optional
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

Sensor	Mating cable	Signal conditioner	BNC cable	Data acquisition	Computer
					

Ordering information

573	A	-	50	-	A
Model	Output signal	-	Range	-	Mounting stud
573	A=IEPE output E=IEPE output with TEDS	-	5=5g 10=10g 25=25g 50=50g 100=100g	-	A= 10-32 to 10-32 B= 10-32 to M5 C*=Special

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