

Type 8720A500

8720A500 K-SHEAR® ACCELEROMETER

The light weight, low profile 8720A500 uses the K-Shear quartz sensing element. Operation in the shear mode reduces sensitivity to thermal transients, base strain and transverse motion. Long-term stability and accuracy is achieved by use of a quartz crystal sensing element. The internal circuit Piezotron® built-in impedance converter provides a low impedance output which eliminates the need

for expensive low noise cable and charge amplifier. The accelerometer case is constructed of titanium and is hermetically sealed to insure years of reliable operation. The ground isolated base is designed for adhesive mounting and exceptional flatness insures maximum high frequency sensitivity.

- Low impedance, voltage mode
- Quartz shear sensing element
- Ultra low base strain
- Ultra low thermal transient response
- Lightweight, small size
- Ground isolated, hermetically sealed
- Conforming to CE



Technical Data	Units	8720A500
Acceleration Range	<i>g</i>	±500
Acceleration Limit	<i>g</i> _{pk}	±1000
Transverse Acceleration Limit	<i>g</i>	±500
Threshold (noise 100µV rms)	<i>g</i> _{rms}	0.01
Sensitivity nom.	mV/ <i>g</i>	10
Resonant Frequency mounted, nom.	kHz	54
Frequency Response -5%, +10%	kHz	1 ... 10000
Amplitude Non-linearity	%FSO	±1
Time Constant nom.	s	1
Transverse Sensitivity typ. (max.)	%	1.5 (3)
Base Strain Sensitivity @250µε	<i>g</i> /µε	0.04
Shock Limit (1 ms pulse width), max.	<i>g</i> _{pk}	5000
Temperature Coefficient of Sensitivity	%/°F	-0.03
	%/°C	-0.06
Temperature Range Operating (4mA supply)	°F	-65 ... 250
	°C	-55 ... 120
Storage	°F	-100 ... 300
	°C	-75 ... 150
Output		
Bias nom.	VDC	11
Impedance	Ω	<100
Voltage FS, nom.	V	±5
Current	mA	2
Source		
Voltage	VDC	20 ... 30
Constant Current	mA	2 ... 20
Impedance min.	kΩ	100

1 *g* = 9.80665 m/s², 1 inch = 25.4 mm, 1 gram = 0.03527 oz

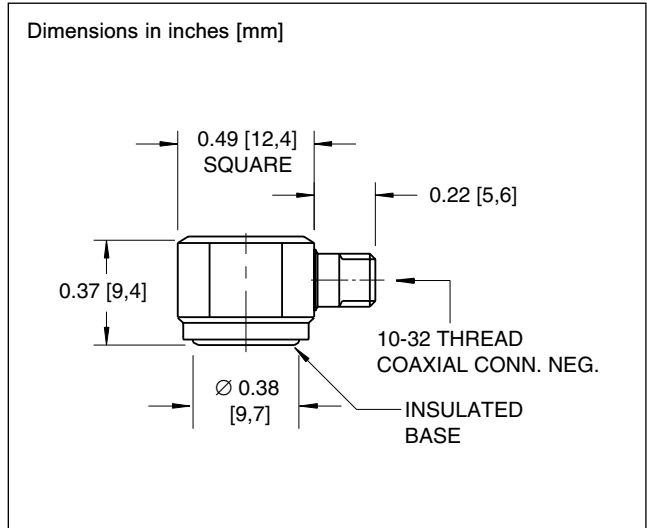
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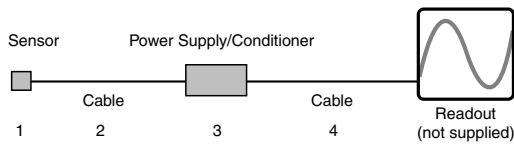
Technical Data	Units	8720A500
Construction		
Sensing Element	type	quartz/shear
Housing/Base	material	titanium
Sealing-Housing/Connector	type	hermetic Al./hard anodized
Connector	type	10-32 neg.
Ground Isolation min.	MΩ	10
Weight	grams	4.9
Mounting	type	adhesive/wax

Applications

Because of the small size and lightweight, this accelerometer is ideal for modal analysis and measurements on light structures. The small size allows for installation on items with limited mounting space such as printed circuit boards.



Ordering Information



Specify:

- 1 - 8720A500 K-SHEAR accelerometer
- 2 - 1761B... cable, 10-32 pos. to BNC pos., specify length in meters
- 3 - 5100 coupler series or dual mode amplifier
- 4 - 1511... output cable, BNC pos. to BNC pos., specify length in meters

Supplied Accessory

8432 mounting wax