

Type 8728A500, 8728A500M8

## 8728A MINIATURE K-SHEAR® ACCELEROMETER

The 8728A500 is a miniature, lightweight accelerometer weighing only 1.6 grams. The sensor is constructed in an environmentally sealed, welded, titanium case. A Teflon integral cable is attached to solder terminals which are potted to permit cable repair. The unit is designed for mounting with an adhesive or mounting wax. Kistler's K-SHEAR® technology assures insensitivity to base strain, thermal transients and transverse (cross-axis) acceleration. Quartz sensing

elements afford excellent long-term stability that ensures repeatable and accurate measurements. The Piezotron® low impedance output provides high immunity to noise and insensitivity to cable motion. If an extension cable is required, an ordinary low-cost coaxial cable can be used between the accelerometer cable and coupler and/or readout equipment. For low temperature or or cryogenic applications down to -320 °F (-195 °C), request the 8728A500M8 version.

- Low impedance voltage mode
- Small, lightweight, integral cable
- Quartz shear stability and precision
- Ultra-low base strain sensitivity and thermal transient response
- Low temperature -195 °C version available
- Conforming to CE



Technical Data	Units	8728A500 8728A500M8
<b>Acceleration Range</b>	<i>g</i>	± 500
<b>Acceleration Limit</b>	<i>g</i> <sub>pk</sub>	±1000
<b>Transverse Acceleration Limit</b>	<i>g</i>	±1000
<b>Threshold</b>	<i>g</i> <sub>rms</sub>	0.008
<b>Sensitivity</b> ±10%.	mV/ <i>g</i>	10
<b>Resonant Frequency</b> mounted nom.,	KHz	76
<b>Frequency Response</b> ±5%	Hz	2 ...10000
±10%	Hz	1 ...15000
<b>Amplitude Non-linearity</b>	%	±1
<b>Time Constant</b> nom.	s	0.5
<b>Transverse Sensitivity</b> typ. (max.)	%	1.5 (3)
<b>Base Strain Sensitivity</b> @250 µε, max.	<i>g</i> µε	0.03
<b>Shock</b> (1 ms pulse) max.	<i>g</i> <sub>pk</sub>	5000
<b>Long Term-Stability</b>	%	±1
<b>Temperature Coefficient of Sensitivity</b>	%/°F	-0.03
	%/°C	-0.06
<b>Temperature Range Operating</b> (4 mA supply current)		
8728A500	°F	-65 ... 250
	°C	-55 ... 120
8728A500M8	°F	-320 ... 250
	°C	-195 ... 120
<b>Storage</b>		
8728A500	°F	-105 ... 305
	°C	-75 ... 150
8728A500M8	°F	-320 ... 305
	°C	-195 ... 150
<b>Output Bias</b> nom.	VDC	11
<b>Impedance</b> max.	Ω	100
<b>Voltage</b> F.S. nom.	V	±5
<b>Current</b>	mA	2

1 *g* = 9.80665 m/s<sup>2</sup>, 1 inch = 25.4 mm, 1 gram = 0.03527 oz

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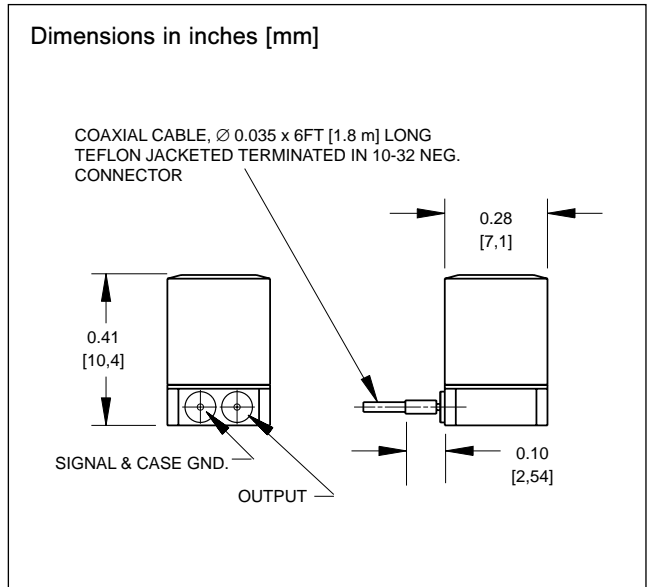
Technical Data	Units	8728A500 8728A500M8
<b>Source</b>		
<b>Voltage</b>	VDC	20 ... 30
<b>Constant Current</b>	mA	2 ... 20
<b>Impedance min.</b>	kΩ	100
<b>Construction</b>		
<b>Sensing Element</b>	type	quartz/shear
<b>Housing/Base</b>	material	titanium
<b>Sealing</b>		welded/epoxy
<b>Weight</b>	g	1.6
<b>Mounting</b>	type	adhesive/wax

**Applications**

The 8728A500 is recommended for precision measurements on small, thin-walled structures or where space is limited. Changes in the characteristics of the test article are minimized when using this sensor. It is ideal for high frequency vibration measurements.

**Related Products**

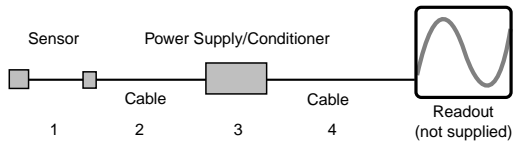
- 8730A500 top 10-32 connector, 1.9 gram mass
- 8732A500 integral cable, 1.1 gram weight
- 8734A500 integral cable, 1.1 gram weight with mounting flange



**Supplied Accessory**

- 8432 mounting wax

**Ordering Information**



Specify:

- 1 - 8728A500 accelerometer or 8728A500M8 low temperature accelerometer
- 2 - 1761B... connecting cable, 10-32 pos. to BNC pos., or 1631C... premium cable, 10-32 pos. to BNC pos., recommended for use with M8 accelerometers used in low temperature applications, specify length in meters
- 3 - 5100 series coupler series or dual mode amplifier
- 4 - 1511... output cable BNC pos. to BNC pos., specify length in meters

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